

**ACC-4000**  
**Addressable Control System**  
**Documentation**

436-798-500

# **VOLUME II**

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## **Graphical Interface User Guide**

ACC-4000  
**ACC-4000**

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# Welcome to the ACC-4000

The General Instrument ACC-4000 addressable controller is part of an integrated addressable system that gives you total control of your cable television environment. Addressable systems are those that allow a cable company's central office to communicate directly with the converters installed in individual subscribers' homes. As a result, you can present your customers with a virtually limitless variety of options. Using the ACC-4000 you can define standard program packages, offer individual pay-per-view events, or take advantage of the fast-growing "impulse" pay-per-view market.

This volume, the *ACC-4000 System User Guide*, provides all the instructions you need to operate the controller. But before you begin to explore the controller's power, take a minute to review the introductory material in this chapter. This information will help you to:

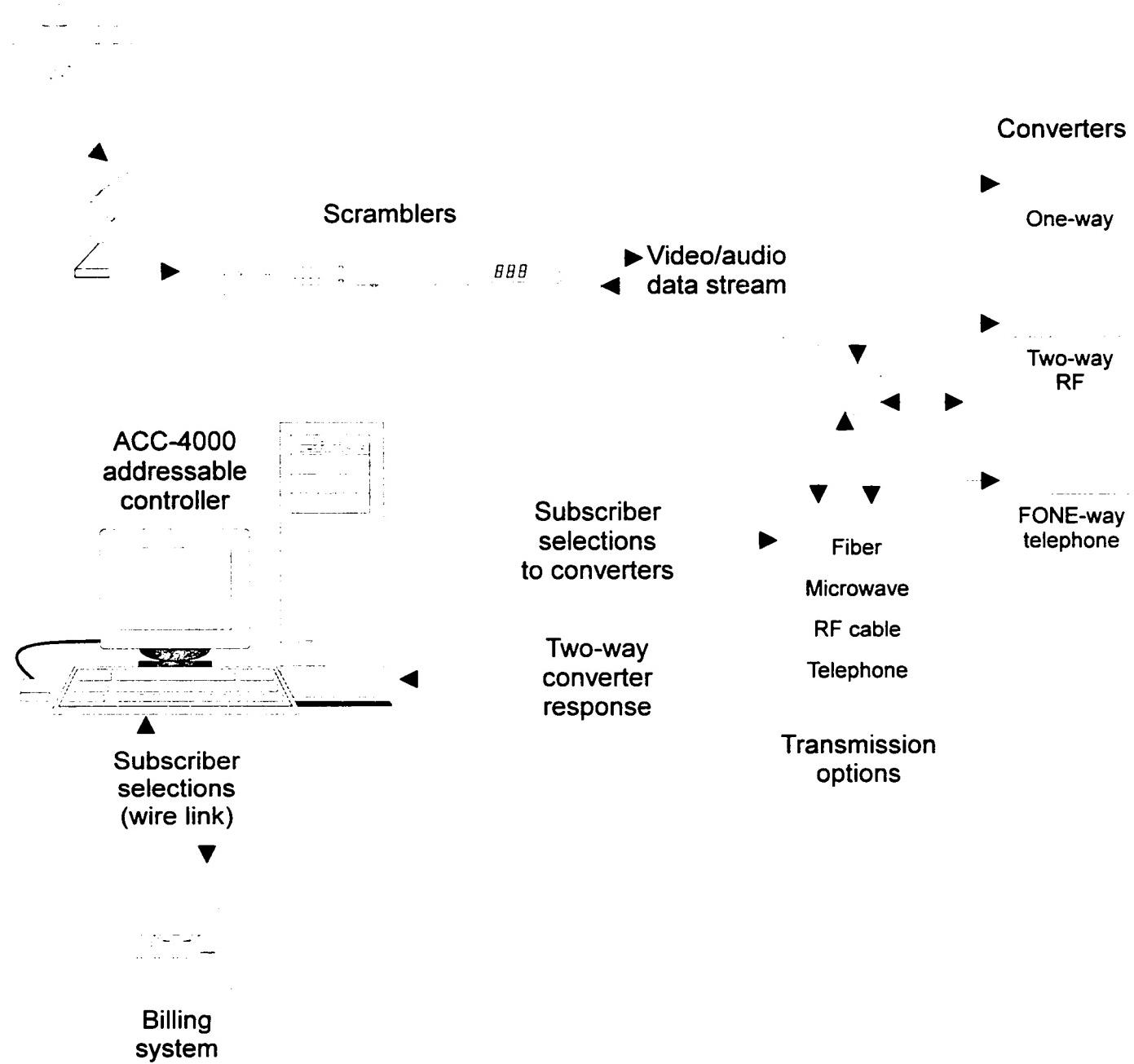
- Understand the controller's role in a complete addressable system
- Identify the individual pieces of hardware on which the controller software runs
- Locate information quickly in this manual
- Know who to call if you need help

Because every cable company's needs can be different, the ACC-4000 addressable system has been designed to control a wide range of modular components. Depending on the service offerings of your particular system, the ACC-4000 can support up to 500,000 converters. But despite the size or complexity of your actual system, its function can still be described as five basic operations:

1. The cable signal is received, generally from a satellite, by the data path equipment.
2. At the headend, the signal is processed and scrambled for security.
3. The addressable controller routes the signals to the appropriate converters.
4. The converter receives the signals and allows the customer to watch the programs or events he or she has purchased.
5. The addressable controller and billing system exchange all purchase information via a standard wire link (business system gateway) interface. This is an optional feature.

## Overview of the Addressable System

The following figure illustrates a complete addressable system. Notice the directions in which the data flows. You see that the control information from the ACC-4000 is merged with the data stream before it is routed to the subscribers' converter boxes. Note, too, that the two-way converter types return information to the controller as well as receive it.



# How Does the Controller Work?

The controller is the brains of an addressable system. Put in its simplest terms, the controller manages the selection and distribution of all programs to subscribers' homes. It can operate in a standalone mode or can be linked to company's business office in order to pass on the customer's selections from the billing system. The controller can be connected to the signal distribution system by fiber optic cable, microwave transmission, RF cable, or telephone wiring. It can communicate with one-way, two-way, FONE-way, and on-screen display converters and control all of the subscriber features of these converters.

The controller, whose function is fully described in this book, operates by tracking all converter activity in a powerful relational database. Because all information is contained in one database, you need to enter or modify information only once. You can use one integrated system to define channel maps, to assign channel identifiers, and to create a wide variety of messages and barker messages that you can distribute on an individual, group, or global basis.

Although the controller's software is powerful, it is easy to use. The system is menu-driven. That means that whenever there is more than one option, the system displays a menu on the screen that lists your choices. You simply click on your selection. If the task you want to perform requires more precise information than is available on a menu — for example, to print a report on Data Collection for the month of December — the system displays a data entry screen on which you type information into labeled fields. Finally, because the system was designed to use "windows," you can perform more than one task at a time. With the click of a mouse you can move in and out of functions.

The controller is a state-of-the-art PC. It consists of a 50 MHz microprocessor housed in a tower configuration, a monitor, keyboard, and mouse. Included with the system are:

#### About the Controller

*Three hard disk drives*

The ACC-4000 contains three hard disk drives to guarantee reliability. The first drive contains the UNIX® operating system. The second drive contains your database information. The third drive is a "snapshot" image of the second disk. As a result, the system never needs to be shut down to run a database backup.

*Addressable Network Interface Card*

The ANIC card is a proprietary network card that insures the data is transported securely to all addressable devices.

*Tape drive*

The high-capacity streaming tape drive is used to load the initial software, to perform routine backups, and to distribute software updates quickly and efficiently.

*Diagnostic modem*

A 14,400 baud external modem is supplied with the system to support remote diagnostic purposes. This allows General Instrument personnel to diagnose a problem and to take remedial steps without the delay of a site visit.

*Terminal concentrator*

A device that allows you to attach the modem and other peripherals to the controller.

## Using This Manual

This manual provides operational instructions and reference material for using the ACC-4000. If you have never used the system before, read the entire manual to become familiar with the system's general operation before you begin. Concentrate on the specific functions you will be performing. Once you have learned the basics, keep this document at hand to serve as a reference tool. If you are already familiar with the ACC-4000 controller, be sure to read the software *Release Notes* and look through this manual for new information you might not know.

After the initial sections of this book that describe general system operation, the chapters follow the order of the menus in the software. Some of these functions are exclusively the responsibility of your System Administrator. Therefore, detailed instructions for using these functions are not included in this volume.

You will find the following information in this volume:

### *Chapter 1*

***Graphical User Interface.*** This chapter introduces the graphical user interface that the ACC-4000 uses. It illustrates the various types of windows the system uses and teaches you how to work with them. This chapter also describes how to use a mouse to perform tasks. If you have not worked with a PC before, review this chapter carefully before proceeding.

### *Chapter 2*

***Navigating Around the ACC-4000 System.*** This chapter describes the appearance and function of each element that appears on the screens. It also tells you how to log in to the system.

### *Chapter 3*

***Converter Operations.*** This chapter defines the converter operating modes, and provides instructions for performing basic converter functions such as adding a converter, modifying converter information, deleting a converter, initializing or reloading a converter, and clearing converter keys. This chapter also describes how to add, modify, and delete information for a single converter or for multiple units by using ranges.

### *Chapter 4*

***Other Converter Operations.*** This chapter lists a variety of additional converter operations such as sending global functions, changing upstream frequencies or emergency alert, or sending channel/frequency maps.

*Chapter 5*

**Impulse Operations.** This chapter describes how you can instruct two-way or FONE-way converters to provide information back to the controller using a variety of information-gathering techniques, such as data collection, viewer ship monitoring, and opinion polling.

*Chapter 6*

**Services/Schedules.** This chapter provides instructions for adding, monitoring, modifying, and deleting pay service and channel scheduling information.

*Chapter 7*

**Headend Equipment.** This chapter lists the types of scramblers supported by the system and tells you how to add, modify, and delete scrambler information.

*Chapter 8*

**Converter Types.** This chapter describes how to define the templates for the converter types and channel maps.

*Chapter 9*

**Data Files.** This chapter provides instructions on using eight utilities that help you manage your disks and files.

*Chapter 10*

**Business System Gateway.** This chapter describes how to establish and terminate the link to your billing system. This function is also referred to as the wire link.

*Chapter 11*

**User Information.** This chapter provides a brief overview of user classes. Each user class, which is set up by your System Administrator, has predefined access rights to different parts of the ACC-4000 system. Your System Administrator assigns you to a user class before you begin to use the system.

*Chapter 12*

**Control and Configuration Utilities.** This chapter lists the several utilities you can run to help you manage the information. This chapter also contains utilities that should be run only by your System Administrator or by General Instrument personnel.

*Chapter 13*

**Reports.** This chapter illustrates the reports you can create on the system and tells you how to run them.

*Chapter 14*

**Message Manager.** This chapter provides a brief overview of the messaging system. Instructions for creating messages remotely, transferring messages to the ACC-4000, and sending messages are contained in separate manuals. See the *Related Documentation* section on page vii for a list of these books.

*Appendix*

**Character-Based Interface.** The Appendix describes the techniques for navigating through the system using the character-based interface instead of the graphical user interface. The character-based interface allows you to move around the system and to make selections on the screens by typing characters on the keyboard rather than by clicking on selections with the mouse.

## Document Conventions

Before you begin to work with the ACC-4000, familiarize yourself with the important stylistic conventions that are used in this manual:

SMALL CAP	Information that appears in small caps represents things that you must enter on the screens. For example, Y or N for Yes or No.
filename	All filenames should be entered in lower case letters only. UNIX™ is case-sensitive and does not recognize filenames entered in upper case or mixed case letters. For example, all reports in Message Manager default to the file name mmrpt.rp. If you want to locate this file, you must type mmrpt.rp. The system cannot find the file if you enter MMRPT.RP or MmRpt.rp.
Optional	You must enter information in all data fields unless they are identified as optional in this manual. If you do not type information into each of the required fields, you cannot exit the screen.
Key + Key	Key combinations represented with a plus sign (+) connecting them indicates that you should press the first key and, while holding it down, press the second key. For example, the instruction Ctrl + C means to press the Ctrl key and while the Ctrl key is depressed, press the C key.

The complete set of documentation that comes with your system, the *ACC-4000 Addressable Control System Documentation*, consists of:

- *Volume I: Overview of the ACC-4000 System*
- *Volume II: ACC-4000 System User Guide*
- *Volume III: System Administrator Reference Guide*
- *Message Manager User Guide*
- *Message Editor System User Guide*
- *Character-Based Interface Quick Reference Card*

If you did not receive all of these manuals, contact your General Instrument representative immediately.

If you need assistance while working with the ACC-4000 system, please call our Technical Response Center at **1-800-537-7653**. The Technical Response Center is open 8:00 am to 6:00 pm Eastern Standard Time, Monday through Friday. When the Technical Response Center is closed, emergency service **only** is available on a call-back basis.

If calling from outside the United States, please use our main switchboard number, **1-215-674-4800**, when contacting the Technical Response Center.

## Related Documentation

## If You Need Help



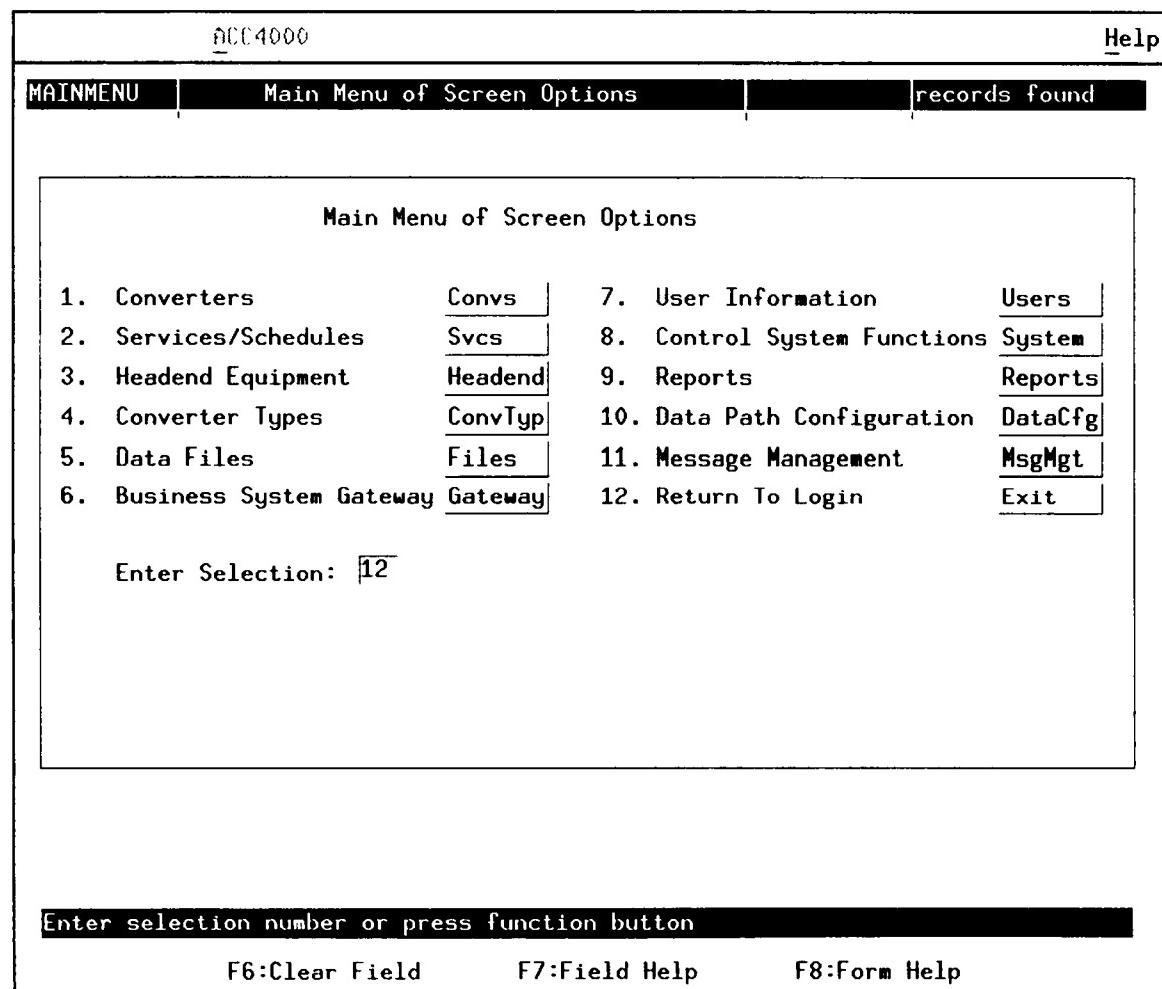
# 1 • Graphical User Interface

Most of the operations performed on the ACC-4000 occur through a group of screens called an *interface*. The interface is the tool that helps you get information in and out of the system. The ACC-4000 has two user interfaces: the *graphical user interface (GUI)*, pronounced "goo-ey") and the *character-based interface*. The GUI is usually displayed on the system monitor, which is the monitor that is connected to the ACC-4000 hardware. The character-based interface is displayed on monitors that are located elsewhere, but it may be displayed on the system monitor as well. The interface you use will depend upon the type of hardware you are using or your preferences.

Although the two interfaces have different appearances and are navigated in different ways, their functionality is the same. That is, whatever operation you choose to perform is carried out identically regardless of the type of interface you are using. The operational information in this volume is presented through the GUI.

Take a look at your monitor. If the screen has the general appearance of the sample screen shown below, then your monitor is using the GUI.

## Introduction to the Graphical User Interface (GUI)



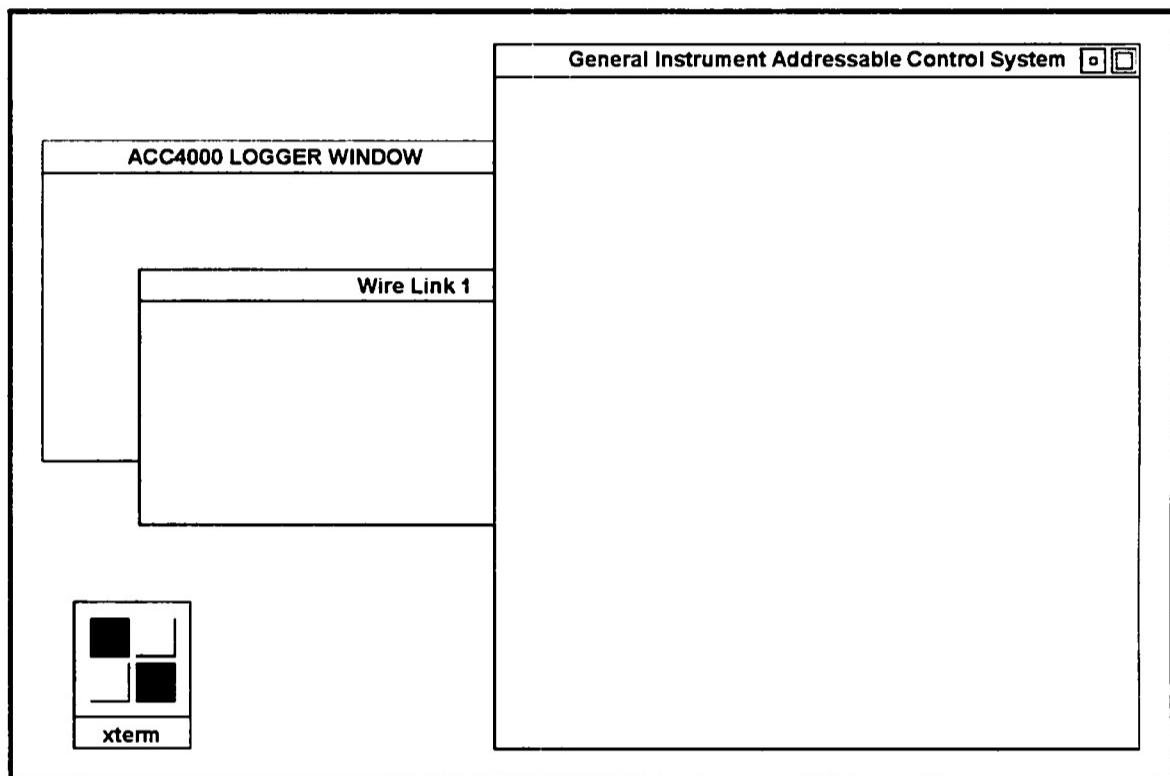
Main Menu of Screen Options

If the screen has a different general appearance, it is not a GUI screen. In that case, consult the *Appendix, The Character-Based Interface*, for information on how to navigate through the character-based screens.

GUI monitors require a mouse or an equivalent pointing device.

## Types of Windows

You perform GUI operations within frames, or screens, called *windows*. Windows are arranged on the *desktop*, which is the GUI name for the monitor.



*Sample desktop*

Several kinds of windows can appear on the desktop, allowing you to perform different types of operations.

### ACC-4000 Motif Window

*Motif* is the name for the GUI window in which the ACC-4000 runs. The illustration on page 1 is an example of a Motif window.

### ACC-4000 Terminal Window

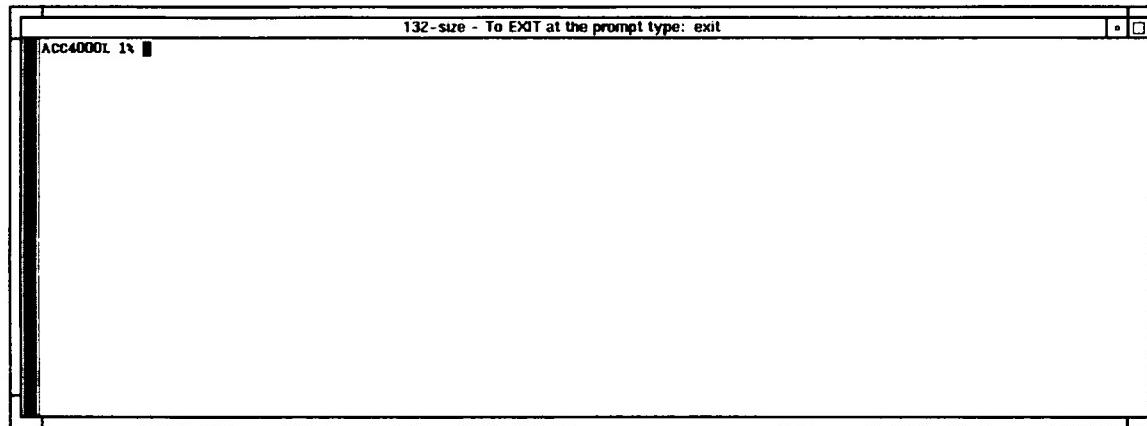
*Terminal*, or *Term*, is the name for the type of window in which the ACC-4000 character-based interface runs. Through this interface, you can perform all controller tasks, although the way you perform them will be slightly different. For important information about the character-based interface see *Appendix, Character-Based Interface*.

The clock on the desktop is a window. You can select it, move it, and maximize or minimize it, just as you would any other window.

## Clock

The *132-Size window* is a screen, 132 characters wide, from which you issue system commands.

## 132-Size Window



*Sample 132-Size window*

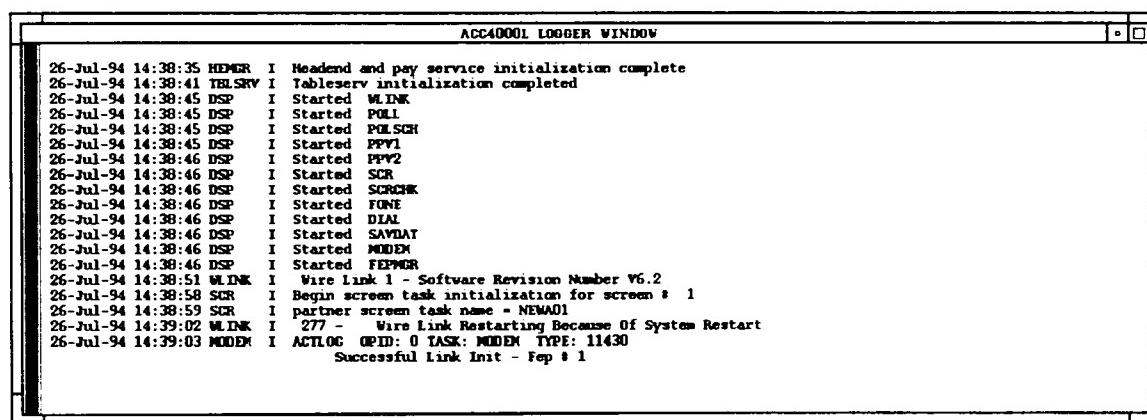
The 132-Size window is used primarily to perform operations that cannot be performed through GUI windows. Usually, your site's technical personnel, or General Instrument personnel, perform these operations. You do not need to use this window during normal operations.

The *80-Size window* is used in the same way as the 132-Size. The only difference is that it is 80 instead of 132 characters wide. Since almost all controller operations require the wider format, use the 132-Size instead of the 80.

## 80-Size Window

The *Logger window* displays all ACC-4000 status messages and error codes and is similar in appearance to the 132-Size window.

## Logger Window



*Sample Logger window*

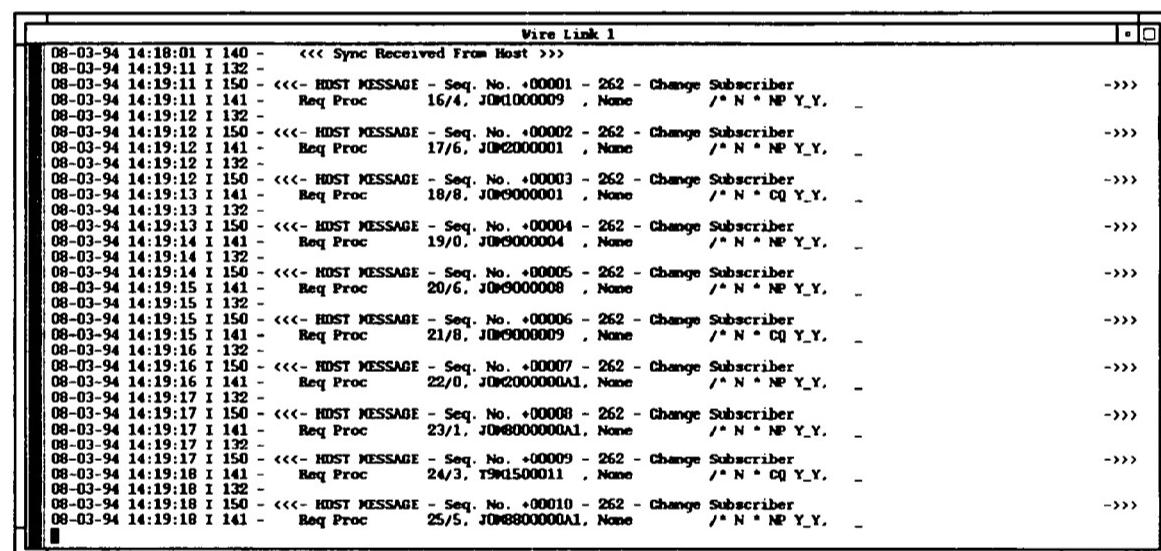
The Logger window has some special characteristics.

- The Logger window appears on the desktop along with the system Login screen when the ACC-4000 is booted.
- The Logger window displays only on the main system console; you cannot see it from a remote terminal.
- This window has no ACC-4000 system prompt, which means that you can neither close it nor issue any system commands from it.

For more information about Logger window messages and errors, see *Volume III, System Administrator Reference Guide*.

### Wire Link Window

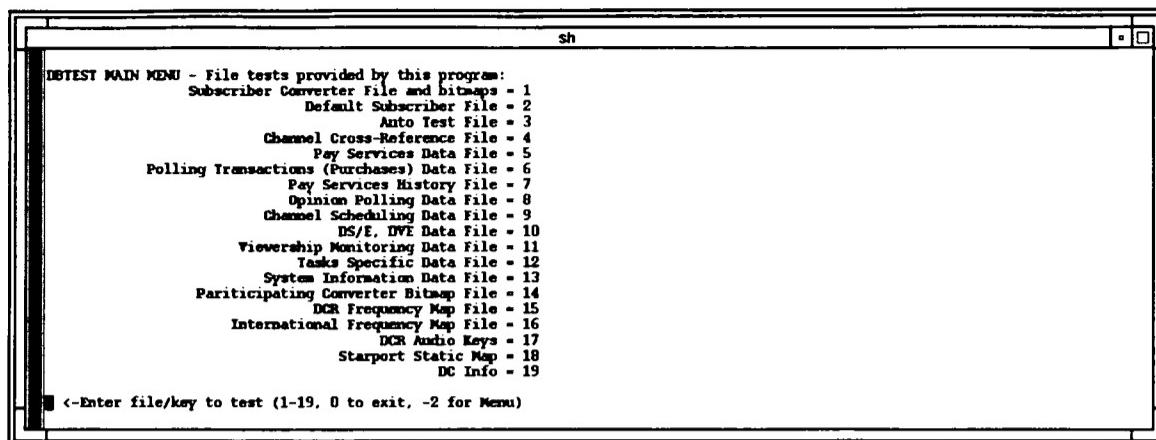
The *Wire Link window*, which you can maintain through the Business System Gateway option on the Main Menu of Screen Options, displays a record of business system processes, error messages, and warnings as they occur. This window appears on the desktop along with the Logger window and the system Login screen when the ACC-4000 is booted.



One Wire Link window appears for each wire link on the system. For detailed information about the business system gateway, see *Chapter 10, Business System Gateway*.

### Shell Window

Certain selections you make from the ACC-4000 menus will open *Shell windows*. A Shell window is simply a 132-Size window that opens during a GUI operation. For example, all of the database utilities you can access from the Reports Menu run in Shell windows.



*Sample Shell window*

When a utility or other application runs in a Shell window, it normally prints instructions on the screen for you to follow, as you can see in the above illustration.

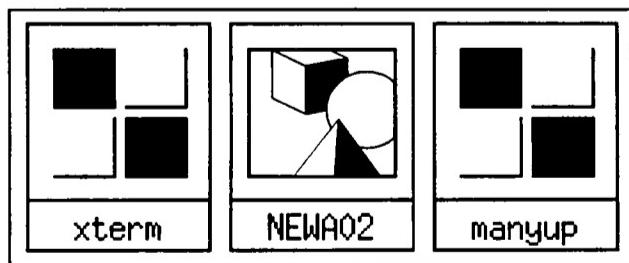
If no instructions appear in a Shell window, or if you change your mind and want to leave the Shell window without letting the application run, press **Ctrl + C**.

Some Shell utilities, such as the database or system backup processes, require that you insert a tape or diskette into a drive when the operation requests you to do so. The only way you can leave this utility without inserting a tape or diskette is to exit at the very beginning, when the utility lets you choose to exit. If you choose not to exit at that time, you will not be able to leave the Shell without inserting a tape or diskette.

#### **Exiting a Shell Window**

An *icon* is a graphic image that represents an active application. If you look back at the sample desktop illustration on page 2, you will see in the lower left part of the screen a small box with a design inside. This box is an icon, and in this case it represents a 132-Size window that is active but not visible as a window.

#### **Icons**



*Sample icons*

You can minimize windows to icons, and then maximize icons into windows. Please see *Maximize or Minimize a Window* beginning on page 11.

## Using the Mouse

The mouse makes it possible to perform many procedures quickly and easily without using the keyboard. For example, you can move from one screen to another or select an ACC-4000 procedure simply by positioning the mouse cursor on the screen and then clicking a button.

### The Cursor

There is a small object on the screen that moves when you move the mouse. This object is called a *cursor*. Using the mouse to move the cursor, you can select windows and other objects on the desktop.



*Sample cursor*

The cursor may have the shape of an arrow, or it may have other shapes. Two additional types of cursor are:

*Hour glass*      The hour glass cursor shows that the system is working on a process that requires all of its resources. The impact such a process has on you is that you can't do anything else on the system at the same time. For example, while the ACC-4000 is loading a new screen onto the desktop, the hour glass cursor appears until the controller is ready to receive another instruction from you. When it is ready, the arrow cursor returns.

*X cursor*      If you move the mouse around on the desktop, you will notice that the arrow changes to an X when the cursor moves to the shaded area of the desktop. When the cursor is an X, you can access the Root Menu pop-up window (see page 7).

### Moving the Cursor

Move the cursor by moving the mouse around the top of your desk or working area. As you move the mouse, the cursor will move in a corresponding direction and at a corresponding speed.

For example, move the mouse diagonally to the left, and the cursor moves diagonally to the left; when the mouse moves quickly, so does the cursor.

To move the cursor effectively and with a minimum of effort, make sure the mouse is on a flat, unobstructed surface. Also, make sure that it remains on the surface as it moves.

You *drag* an object when you use the mouse to move it around the screen.

### Dragging an Object

1. Move the cursor onto the object you want to drag. If you are dragging a window, place the cursor in the horizontal bar that displays the window's title.
2. Hold down the left button on the mouse.
3. Use the mouse to move the cursor while you hold down the left button on the mouse. The object appears to be stuck to the cursor and follows it across the screen.
4. Let go of the left mouse button as soon as the object is where you want it.

When you *select*, or highlight, an object, that object becomes available for controller operations.

### Selecting an Object

For example, only one window on the desktop is available at any given time. To make another window available, position the cursor anywhere within its borders and click the mouse button once. The window you clicked on now appears in front of the other windows, and its border is a brighter color.

You can select some objects by double-clicking. To select an object this way:

1. Position the cursor on the object you want to select.
2. Press the left button on the mouse twice, quickly. The object is selected.

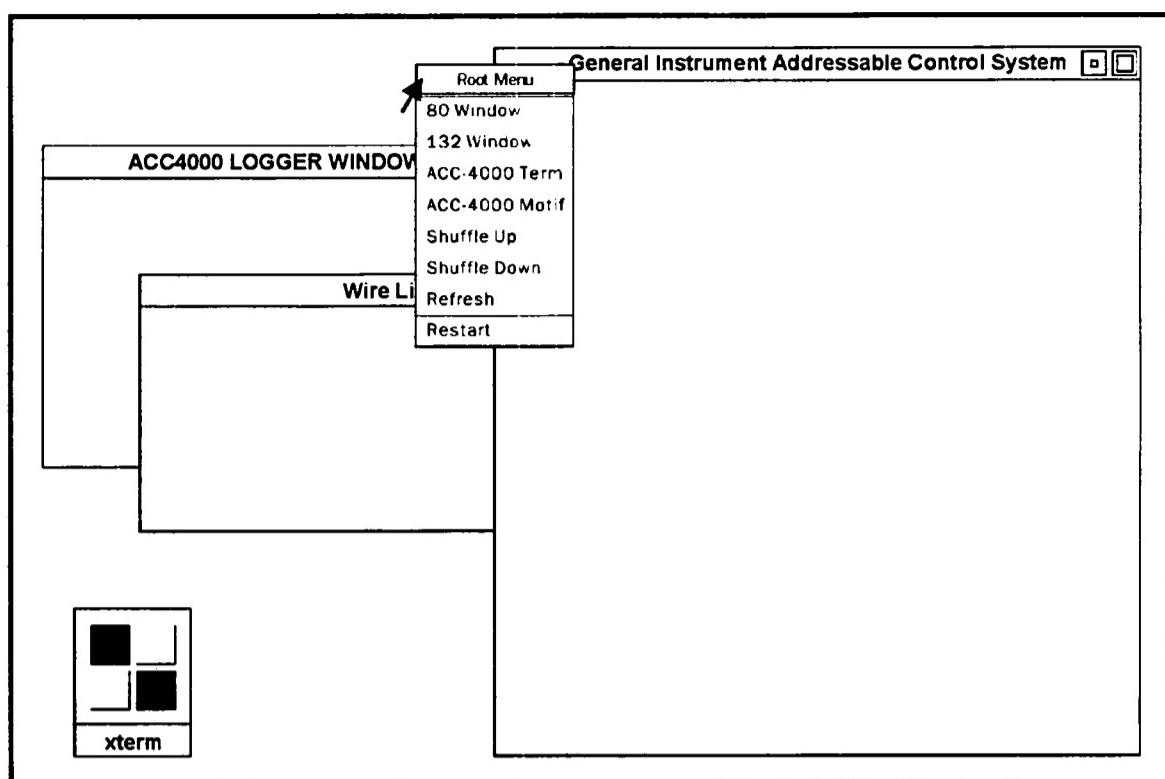
Double-clicking is an uncommon GUI technique on the ACC-4000. One of its few applications is to restore an icon to its original dimensions (see *Restore a Window* on page 12).

You can open and close windows, move them around on the desktop, change their sizes, and bring them to the foreground or send them to the background.

### Window Operations

The Root Menu pop-up window lets you open ACC-4000 windows, shuffle through windows on the desktop, and refresh and restart windows.

### The Root Menu Pop-Up Window



*Root Menu pop-up window*

To use this menu:

1. Position the cursor on a part of the desktop that is not covered by an icon or window.
2. Press and hold down the left button on the mouse. As long as you hold down the mouse button, a small pop-up window, the Root Menu, appears near the cursor.
3. Still holding the left button down, move the mouse to select the window you want to open or the operation you want to perform, and then let go of the button.

This type of window does not behave in quite the same way as the other types of windows on the system. Where you have learned to position the cursor on an object and then click the mouse button to select it, the pop-up window allows a selection when you *release* the mouse button. When you bring this kind of window up on the desktop, but decide that you do not want to make a selection, make sure the cursor is completely off the window before you release the mouse button.

For information about 80-Size and 132-Size windows, see page 3; for information about shuffling through, refreshing, and restarting windows, see the following information.

The window you want to open may already be on the desktop, but hidden by another window. So before opening a new window, *shuffle* through the windows on the desktop one at a time.

There are two ways to shuffle through windows. You can use the Shuffle Up and Shuffle Down selections from the Root Menu pop-up window or you can press Alt + Tab. If there is a window behind the currently active window, it will rise to the top of the desktop. Keep using the Root Menu pop-up window or Alt + Tab until you have looked through all the windows stacked on the desktop.

Refreshing a window through the Root Menu pop-up window is sometimes called "repainting." If you see characters or other graphic items in unusual places on a screen, try the refresh feature. The screen should come back after this process with all its data the way you left it, except that the unwanted images will be gone. If the refresh doesn't work, try the restart.

When you restart a window, you restart the program that creates and manages the windowing system. You might try a restart if a refresh didn't work, or if you find that the cursor responds only while it is on the desktop, that is, on the empty, shaded area of the monitor. If the restart doesn't work, see your System Administrator.

You can move a window from one position on the desktop to another.

1. Position the cursor at the top of the window, in the horizontal bar that displays the window's title.
2. Drag the window to its new position.

## Shuffling through Windows

## Refreshing Windows

## Restarting Windows

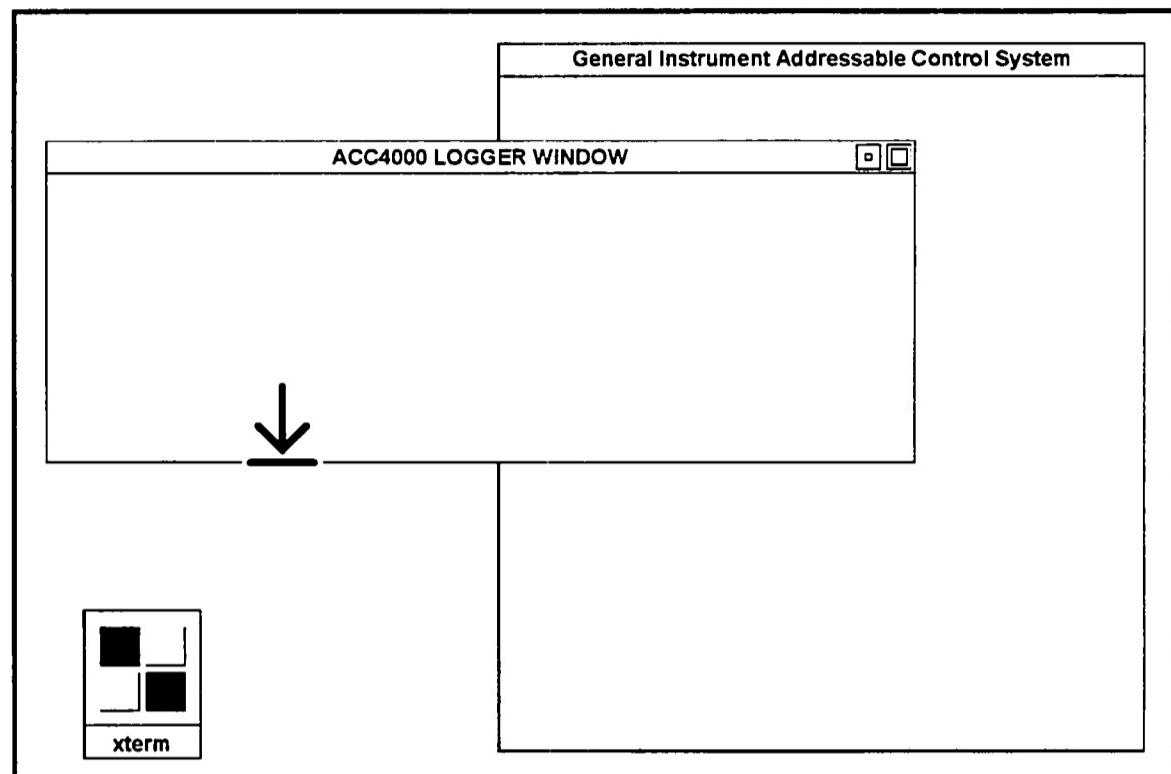
## Moving a Window

### Changing the Dimensions of a Window

You can change a window's height and width.

1. Move the cursor to one of the window's borders.

The cursor changes shape when it is in a position on the border that allows a change of dimension.

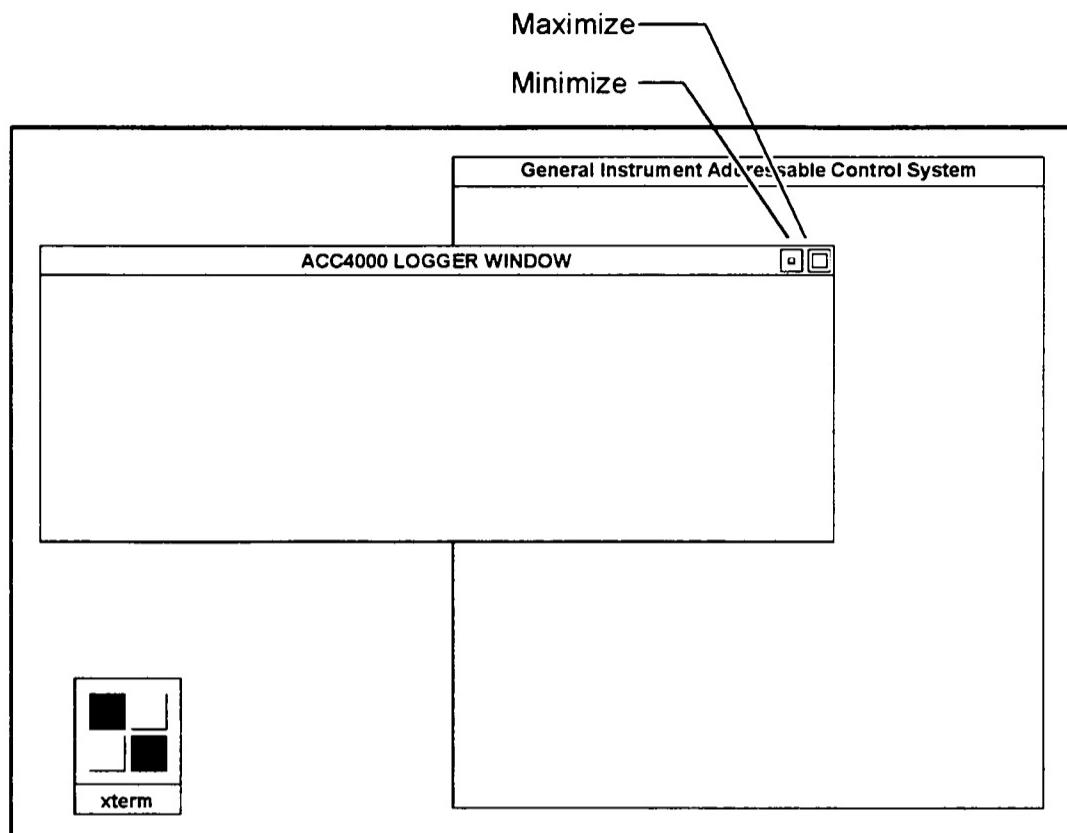


*Re-sizing a window*

2. Drag that border inwards to make the window smaller or outwards to make it larger. For example, to make a window larger, drag the bottom border further toward the bottom of the screen. As you drag the border, the window stretches.
3. Continue to drag each of the window's borders until the window is the size you want.

To *maximize* a window is to enlarge it so that it takes up the entire desktop; to *minimize (iconize)* a window is to reduce it to an icon.

### Maximize or Minimize a Window



#### *Maximizing and minimizing a window*

Maximizing a window causes it to fill the entire screen so that you can see more information at one time. Maximizing a window is particularly helpful when you generate reports from the Reports option on the Main Menu of Screen Options. The Shell window that displays report information does not show as much data as it could because it does not fill up the entire screen. You may want to maximize this window in order to see more report information at one time.

### Maximize a Window

To maximize a window, click on the small box containing the larger square, which appears in the upper right corner of the window you wish to maximize.

The window now expands and covers the entire desktop. When you finish working in the maximized version of the window, click again on the maximize box in the upper right hand corner, and the window will return to its previous dimensions.

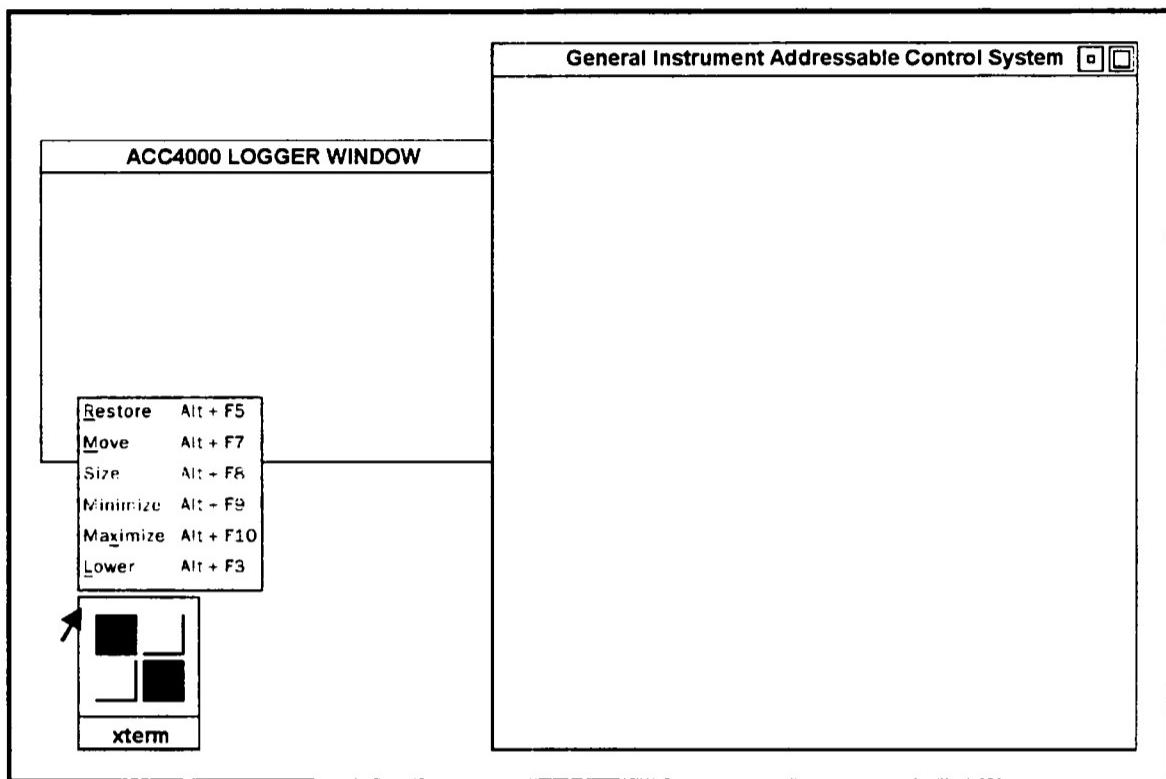
You may want to minimize one or more windows on the desktop in order to have an uncluttered view of a remaining window. To minimize a window, click on the small box containing the smaller square, which appears in the upper right corner of the window you wish to minimize. An icon replaces the window.

### Minimize (Iconize) a Window

When a window is reduced to an icon, it is still an active window even though you don't see it in screen form. When you want to access a minimized window, use the restore procedure described below.

### Restore a Window

To restore a window means to return the window to the size and location it had before it was iconized.



*Restoring an iconized window*

1. Click on the icon you want to restore. A small pop-up menu containing six options appears immediately above the icon.
2. Click on Restore. The icon disappears and the window reappears in its last position and size.

You can also double-click on an icon to restore it.

### Close a Window

You may find it necessary to close a 132-Size, an 80-Size, a Motif, or a Term window.

To close an 80- or a 132-Size window, simply type *exit* at the system prompt and then press the Enter key.

To close the Motif or Term window interfaces, return to the Login screen, type the appropriate password in the Password field, and press the Enter key.

## 2 • Navigating Around the ACC-4000

Before you can work on the ACC-4000, you must be assigned a User Name and Password by your System Administrator. You will use this User Name and Password in the Login screen.

The Login screen is the first Motif window encountered on the ACC-4000. It displays information extracted from your system's configuration file (see *Volume III, System Administrator Reference Guide* for information on the system configuration file).

### Logging in to the ACC-4000

ACC-4000

LOGIN      Help

General Instrument Addressable Control System

User Name:  Password:

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Site Number: 104 Geocode: 1 Terminal: sherry:0.0 Software Version: V06.20

Number ANICS Installed: 1      Number of Subscriptions: 16  
Parallel Data Streams: 1      1st Subscription Service Code: 1  
List Maintenance: HOST      Number of Simultaneous Events: 48  
Number List Maps: 8      1st Event Service Code: 89  
Return Frequency: 08.9 MHz      Data Stream Baud Rate: 13.97 KHz

Data Base Size: 256 K Subscribers      Converter ID Usage: 32 K Groups

1st group 1-way	2nd group 2-way	3rd group phone	4th group 1-way
5th group 2-way	6th group 2-way	7th group phone	8th group 1-way

Enter operator name

F6:Clear Field      F7:Field Help      F8:Form Help

*Login screen*

**Site Number**      A unique code for each cable company site. Converters must store this code if they are to communicate with the ACC-4000.

**Geocode**      A code allowing the cable system to segment the converter population into several major groupings.

**Terminal**      Name or number of the specific terminal you are using.

<i>Software Version</i>	A number that identifies the specific release of the ACC-4000 system software you are using.
<i>Number of ANICS Installed</i>	Number of transmission devices that communicate over the addressable data stream.
<i>Number of Subscriptions</i>	Number of Service Codes allocated for subscriptions.
<i>Parallel Data Streams</i>	Number of simultaneously-maintained transmission outputs to the data stream.
<i>1st Subscription Service Code</i>	Identifies the first available scrambler tag for descrambling subscriptions.
<i>List Maintenance</i>	Identifies which system (host or ANIC) generates the lists of authorizations. Currently, this is the ACC-4000 system (host).
<i>Number of Simultaneous Events</i>	The maximum number of simultaneous Pay-Per-View events that can be available at one time.
<i>Number of List Maps</i>	The extent to which the ACC and ANIC are buffered when they communicate (queue depth).
<i>1st Event Service Code</i>	Identifies the first scrambling tag used for Pay-Per-View events.
<i>Return Frequency</i>	Frequency at which two-way converters transmit data upstream.
<i>Data Stream Baud Rate</i>	Rate of transmission over addressable data stream.
<i>Data Base Size</i>	The number of subscribers that the system is configured for.
<i>Converter ID Usage</i>	Defines how many converters are grouped into a partition (always 32K).
<i>Groups</i>	Indicates the usage of each of the partitions (for one-way, two-way, or FONE-way converters).

To log in to the system:

1. Type your User Name in the User Name field, and press either the Tab or Enter key.
2. Type your Password in the Password field, and press either the Tab or Enter key.

If you enter an invalid User Name or Password, a dialog box appears. Click on the Continue button in this box in order to return to the Login screen.

The Main Menu of Screen Options appears after a successful login.

ACC4000			<u>Help</u>																								
MAINMENU	Main Menu of Screen Options	records found																									
<p>Main Menu of Screen Options</p> <table><tr><td>1. Converters</td><td>Convs</td><td>7. User Information</td><td>Users</td></tr><tr><td>2. Services/Schedules</td><td>Svcs</td><td>8. Control System Functions</td><td>System</td></tr><tr><td>3. Headend Equipment</td><td>Headend</td><td>9. Reports</td><td>Reports</td></tr><tr><td>4. Converter Types</td><td>ConvTyp</td><td>10. Data Path Configuration</td><td>DataCfg</td></tr><tr><td>5. Data Files</td><td>Files</td><td>11. Message Management</td><td>MsgMgt</td></tr><tr><td>6. Business System Gateway</td><td>Gateway</td><td>12. Return To Login</td><td>Exit</td></tr></table> <p>Enter Selection: <u>12</u></p>				1. Converters	Convs	7. User Information	Users	2. Services/Schedules	Svcs	8. Control System Functions	System	3. Headend Equipment	Headend	9. Reports	Reports	4. Converter Types	ConvTyp	10. Data Path Configuration	DataCfg	5. Data Files	Files	11. Message Management	MsgMgt	6. Business System Gateway	Gateway	12. Return To Login	Exit
1. Converters	Convs	7. User Information	Users																								
2. Services/Schedules	Svcs	8. Control System Functions	System																								
3. Headend Equipment	Headend	9. Reports	Reports																								
4. Converter Types	ConvTyp	10. Data Path Configuration	DataCfg																								
5. Data Files	Files	11. Message Management	MsgMgt																								
6. Business System Gateway	Gateway	12. Return To Login	Exit																								
Enter selection number or press function button																											
F6:Clear Field		F7:Field Help	F8:Form Help																								

*Main Menu of Screen Options*

## Using the Keyboard

The graphical interface is designed so that many operations are performed using the mouse rather than the keyboard.

However, there are certain functions that can only be performed using the keyboard, such as entering or changing information in the database. Several keys should be mastered:

<i>Tab</i>	Moves the cursor to the next field on the screen.
<i>Enter</i>	On a menu, pressing this key executes the selected option.  On other screens, this key functions like a Tab key, moving the cursor to the next field on the screen.
<i>Backspace</i>	Deletes the character to the left of the cursor.
<i>Delete</i>	Deletes the character to the right of the cursor.
<i>Arrow</i>	Arrow keys are always those on the arrow keypad, below the six-key special function keypad. Use the up and down arrow keys to go backward or forward in a zoom list.  If you use the arrow keys to advance through the fields on a screen, the data you type just before you press an arrow key is not saved.

There are also several function keys that are useful:

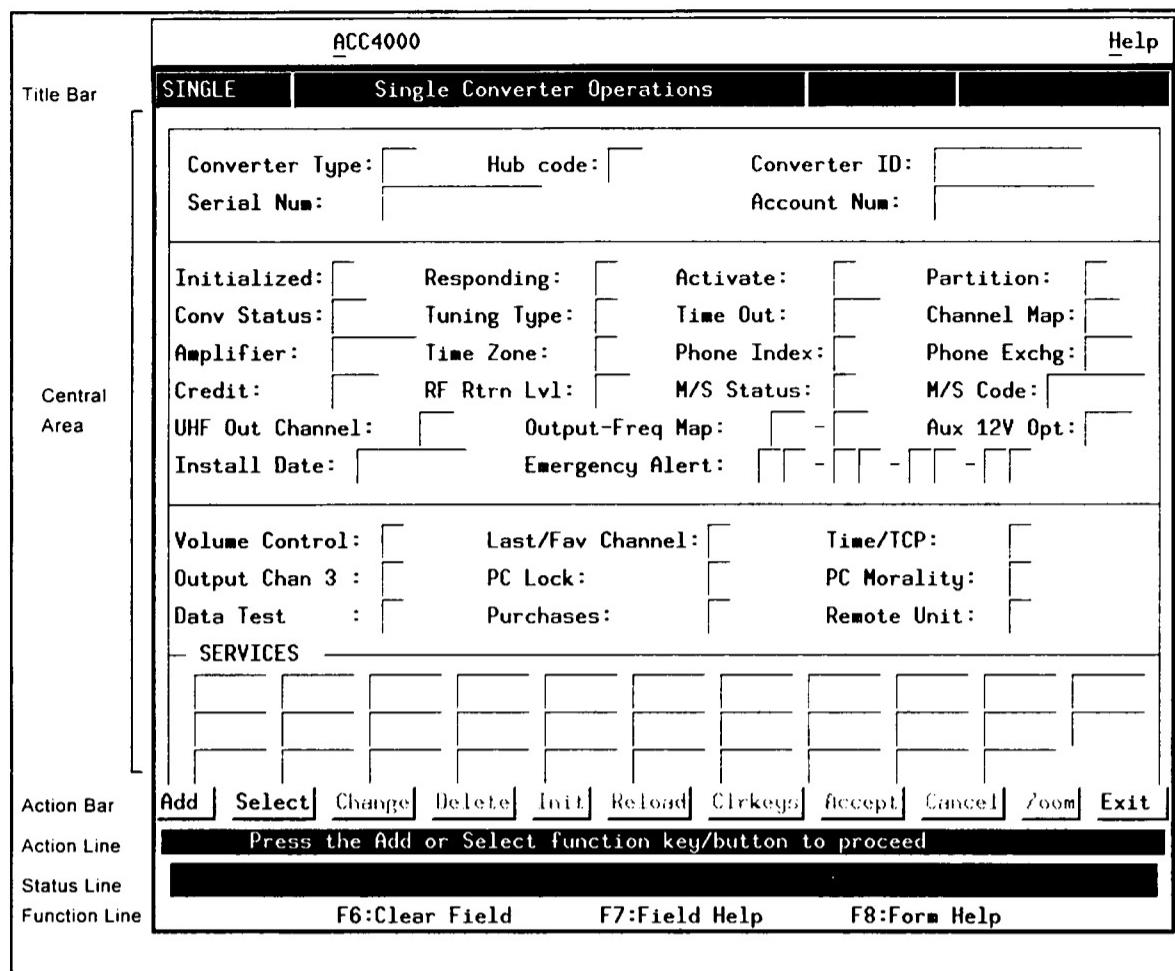
- F6* Clears the information in the field where the cursor is positioned.
- F7* Displays a field help screen, when available, which provides help for the field in which you are currently positioned.
- F8* Displays a help screen, when available, which provides general help for the screen currently displayed.

## Screen Layout

The graphical interface is made up of many individual screens, each serving a different purpose. However, all of these screens fall into four general types: menu screens, screens where information can be entered, shell dialog boxes, and regular dialog boxes.

All screens of a particular type have similar components. Once you know how to move and work within these categories of screens, you will know how to perform operations and navigate throughout the entire system.

Most ACC-4000 screens consist of six areas: a title bar running along the top, a central area in the middle, an action bar, action line, and status line near the bottom of the screen, and immediately below them a function line.



### *Parts of the screen*

The title bar consists of four boxes that run horizontally near the top of the screen. The first box displays the screen name, such as SINGLE. The second box displays the screen title, such as Single Converter Operations. The third and fourth boxes may display system and database *record* information.

### **Title Bar**

A record is a group or set of data items that identify something specific in the database. For example, the information that you see on the Single Converter Operations screen represents a collection of data that describes one particular converter; that collection is called a record. The information that appears in the two right-most boxes of the title bar displays the status of the current operation and its records.

This is the general work area in which you view, add, change, or delete the information that appears in fields.

### **Central Area**

All screens contain an action bar, which is usually located near the bottom of the screen. The action bar contains *buttons* that represent controller functions or operations. The number and kinds of buttons vary for each screen in the system.

### **Action Bar and Buttons**

When you click on a button, you begin an operation or process specific to that screen. For example, clicking on the Select button in the previous illustration tells the system to get ready to find a converter;

only after you click on Select will the system allow you to enter the converter's ID in the Converter ID field.

Here is a selection of buttons and the operations they initiate. This selection can be found on most screens.

- Add* Tells the system you want to add something to the database.
- Select* Tells the system you want to look at information that already exists in the database.
- Change* Tells the system you want to make a change to a record in the database. Typically, you will click on this button after a record selection is made to indicate that you now want to make a change.
- Delete* Removes a selected record from the database.
- Accept* Tells the system that you are satisfied with the information you entered into a screen. Click this button after you are satisfied that all the information you entered into the screen is accurate, and you want the database updated accordingly.
- Cancel* Clears all the information you entered or changed on the screen. The screen will remain on the screen, but its fields will now be either blank or returned to the state they were in the last time the Accept button was used.
- Zoom* Clicking on the Zoom button displays a list of valid data items that can be entered into the field that is currently highlighted. (See page 10.)
- Exit* Returns to the previous screen. Any changes you made since the last time you clicked on the Accept button are lost.

Buttons can be *disabled* or *enabled*. If a button is disabled, its lettering has a grayed-out appearance on the screen. If a button is enabled, its lettering is a crisp black.

As you navigate through the system, you will find that buttons become enabled and disabled depending upon the operations you initiate. For example, the Zoom button is enabled only after you have clicked on the Add or Select button (for more information on the Zoom feature, see page 10).

#### Action Line

On most non-menu screens, a message appears near the bottom of the screen. Its purpose is to indicate what action should be performed, that is, what buttons should be clicked. An example of this kind of message is, "Press a function key/button then the Accept key/button to proceed."

The status line may display field help for the field that is currently highlighted. Or, it may display information about the process that is occurring, for example, "Spawning stand-alone program ...."

**Status Line**

The last line at the bottom of the screen contains a list of function keys and a description of what actions they perform.

**Function Line**

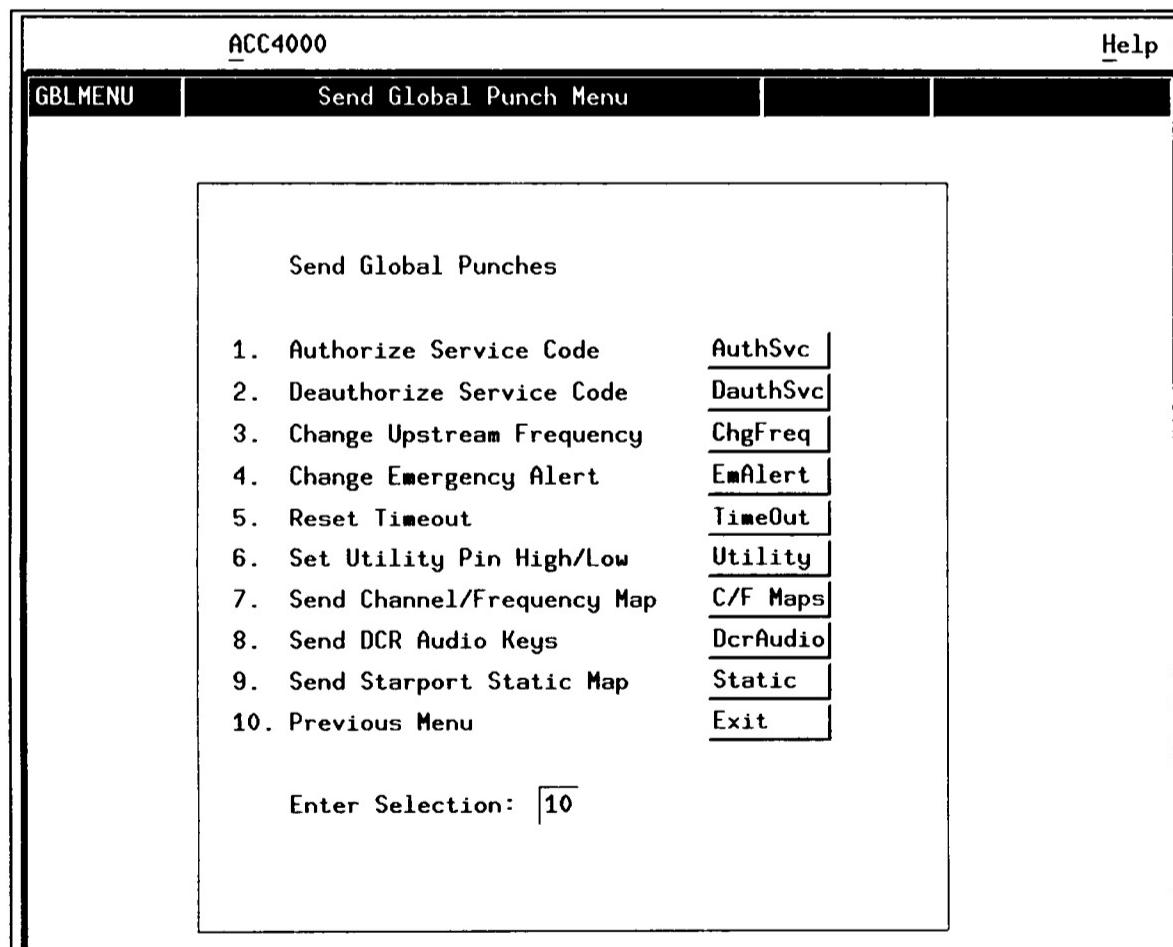
**F6** Clears a field of its data so that you can enter new information.

**F7** When help is available, gets help for the field that is currently highlighted.

**F8** When help is available, gets help for the current screen.

Menus contain several options. Each of these is used either to initiate an operation or to go to a different part of the ACC-4000 program.

The name of each option is located on the left and is followed by a button used to select the option. There is also a field at the bottom of each menu, the Enter Selection field, which always displays a default value. The value is the number of the option that is accepted if you press the Enter key.

**Working with Menus**

*Sample menu*

### **Using the Mouse to Select a Menu Option**

Use the mouse to select a menu option:

1. Place the mouse on a flat surface and move the mouse until the arrow cursor is positioned over the button representing the option to be selected.
2. Click the left mouse button. The option is selected, and the ACC-4000 begins the indicated operation or goes to the selected screen.

### **Using the Keyboard to Select a Menu Option**

You can use the keyboard as well as the mouse to select a menu option:

1. Press the F6 key. The default value in the Enter Selection field disappears.
2. Type in the number of the option that you want.
3. Press the Enter key. The option is selected, and the ACC-4000 begins the indicated operation or goes to the selected screen.

You can also accept the default value shown in the Enter Selection field by simply pressing the Enter key on the keyboard.

### **Working with Screens Where Data Is Displayed in Fields**

Most screens in the ACC-4000 system contain one or more fields. Fields are the individual areas of a screen that display or accept data. Each field has two parts: a title identifying the field and an area where the information is entered and displayed.

**Before attempting to work with a screen, look at the instructions in the status or action line at the bottom of the screen.**

In the illustration that follows, the action line tells you to use the Add or Select button. You must use one or the other of these buttons, in this case to add or select a converter, before you can work with any of the information on this screen.

The screenshot displays the 'Single Converter Operations' screen of the ACC-4000 software. The interface is a text-based menu with various input fields and function keys. Key sections include:

- Top Bar:** ACC4000, Help
- Section Headers:** SINGLE, Single Converter Operations
- Data Fields:**
  - Converter Type: [Field], Hub code: [Field], Converter ID: [Field]
  - Serial Num: [Field], Account Num: [Field]
  - Initialized: [Field], Responding: [Field], Activate: [Field], Partition: [Field]
  - Conv Status: [Field], Tuning Type: [Field], Time Out: [Field], Channel Map: [Field]
  - Amplifier: [Field], Time Zone: [Field], Phone Index: [Field], Phone Exchg: [Field]
  - Credit: [Field], RF Rtrn Lvl: [Field], M/S Status: [Field], M/S Code: [Field]
  - UHF Out Channel: [Field], Output-Freq Map: [Field], Aux 12V Opt: [Field]
  - Install Date: [Field], Emergency Alert: [Field] - [Field] - [Field] - [Field] - [Field]
  - Volume Control: [Field], Last/Fav Channel: [Field], Time/TCP: [Field]
  - Output Chan 3: [Field], PC Lock: [Field], PC Morality: [Field]
  - Data Test: [Field], Purchases: [Field], Remote Unit: [Field]
- SERVICES:** A row of 12 empty fields followed by function keys.
- Function Keys:** Add, Select, Change, Delete, Init, Reload, Clrkeys, Accept, Cancel, Zoom, Exit.
- Message:** Press the Add or Select function key/button to proceed.
- Bottom Row:** F6:Clear Field, F7:Field Help, F8:Form Help

Typical screen where data is displayed in fields

To enter information into a field on an ACC-4000 screen:

1. Press the Tab key until the field you want is highlighted. A red line surrounds the area that contains field data.
2. Type the information to be entered.
3. Press the Tab key as many times as necessary to move to the next field where information is to be entered.
4. Repeat the process of pressing the Tab key to go to the field and enter the information until all the required information has been entered onto the screen.
5. Click on the Accept button. As soon as you click on the Accept button, the information on the current screen is added to the database.

#### Entering Information in a Field

To change information displayed in one or more fields:

1. Press the Tab key until the field you want is highlighted. A red line will surround the area that contains field data.
2. Press the F6 key. The information in the field disappears.
3. Type in the new information.

#### Changing Information in a Field

4. Use the Tab key to move to the next field where you wish to change information, and repeat this process.
5. When you are done changing the information in your selection of fields, click on the Accept button along the action bar near the bottom of the screen.

As soon as you click on the Accept button, the new information is added to the database.

### **Canceling Changes**

Occasionally, while working on a screen you may discover that the information being entered is not correct. Whenever this happens just click on the Cancel button.

All changes on the screen are cleared, and the screen returns to what was displayed when it first appeared, or to what it looked like the last time the Accept button was pressed.

### **Selecting Information with the Zoom Button**

The ACC-4000 often requires that you specify the value of a data item, such as the number of a Converter Type code, that an operation is to be performed on. You may not always know what value to enter into a screen field for that item. If this is the case, look at the buttons along the action bar near the bottom of the screen. If the Zoom button is enabled, then you can display a selection of valid values for that field.

The Zoom button is only enabled for fields where a finite number of data items or values can be entered. It is never enabled for fields that can have open-ended entries, such as a Converter ID field. Similarly, the Zoom button does not list yes or no values.

1. Using the Tab key, move the cursor to the desired field.
2. Click on the enabled Zoom button. A new window will appear with a list of possible values that may be entered in the field you selected.
3. Advance forward or backward along the list by using the down and up arrow keys, or use the scroll bar on the left of that dialog box.

For a further explanation of how to use the scroll bar, see page 11.

One item on the list is always highlighted, that is, surrounded by a red line.

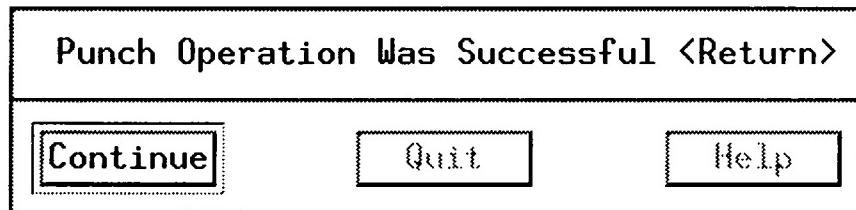
4. Click on the Accept button if you want the highlighted item to be entered in the field on the screen that was displayed before you pressed the Zoom button.

or

Click on the Cancel button after looking at the Zoom list if you do not want to accept any of the values that are shown. You are returned to the original screen.

The *Motif dialog box* reports on a condition of the system or the result of a procedure. You must click on the Continue button in order to resume ACC-4000 screen operations.

### Motif Dialog Box

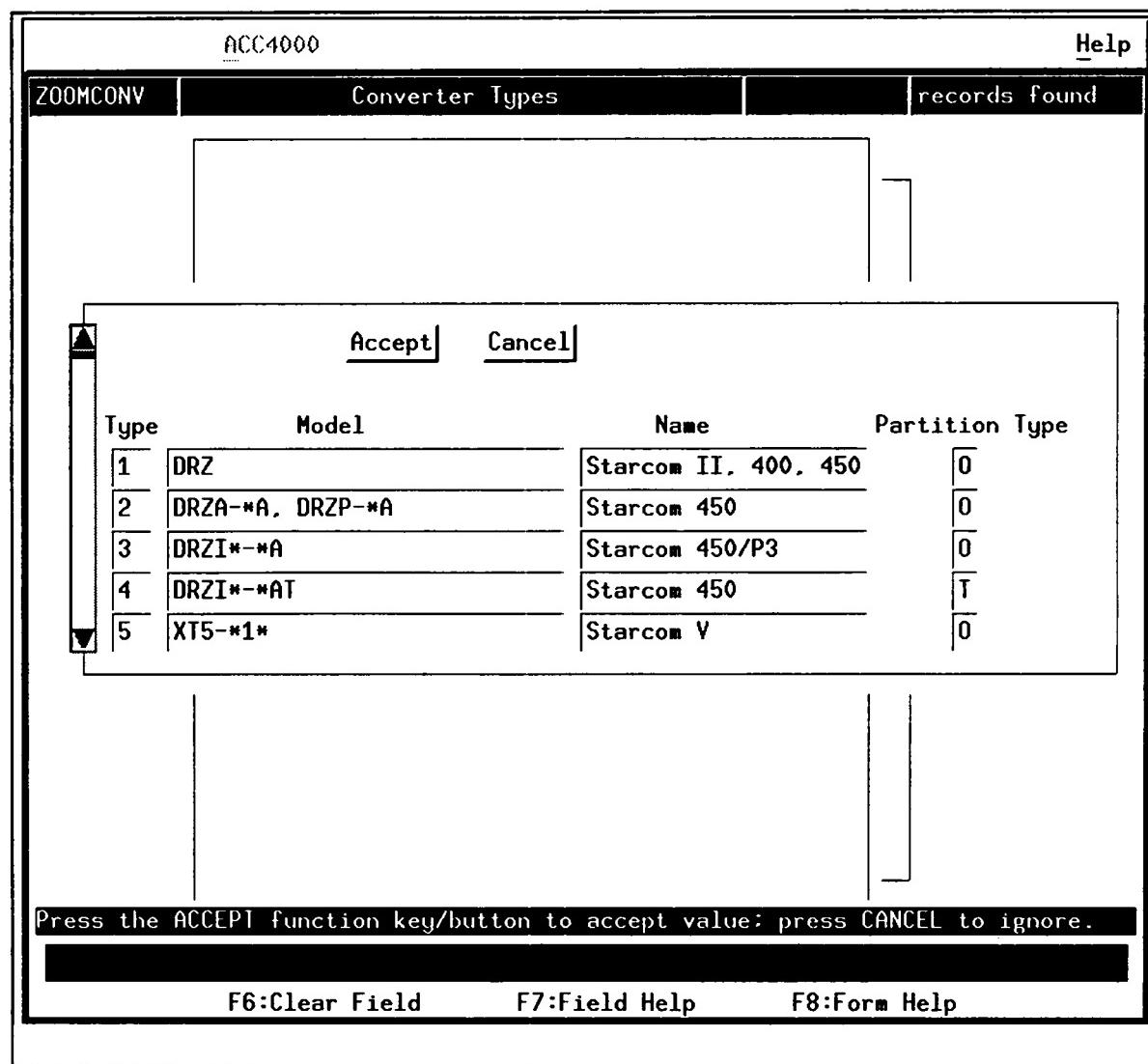


Sample Motif dialog box

The ACC-4000 can list information about a number of objects on a screen. Sometimes there will be more objects to be listed than can be displayed on a single screen. Whenever this happens, a scroll bar will appear to the left of the dialog box containing the list. The scroll bar consists of three parts:

- |                                    |   |
|------------------------------------|---|
| <i>Forward and backward arrows</i> | An Up arrow appears on top of the scroll bar and a Down arrow on the bottom. These arrows are used to move backward and forward along the list, respectively. |
| <i>Scroll bar</i>                  | There is a small rectangular bar between the up and down arrows. Its position indicates how far you have advanced along the list.                             |
| <i>Cursor</i>                      | A small box always appears around one value in the list. This indicates what object will be selected if you click on the Accept button.                       |

### Using the Scroll Bar in Motif Windows



### *Scroll bar for Motif windows*

#### **Moving Forward Along a List (Down Arrow)**

Move the cursor down the list one line at a time:

1. Move the arrow cursor to the down arrow at the bottom of the scroll bar, and hold down the left button on the mouse. The cursor will drop to the next line. The longer you hold down the mouse button, the more lines the cursor will drop.
2. Let go of the left button on the mouse as soon as the cursor lands on the appropriate line. The list stops scrolling.

#### **Moving Backward Along a List (Up Arrow)**

Move the cursor up the list one line at a time:

1. Move the arrow cursor to the up arrow at the top of the scroll bar, and hold down the left button on the mouse. The cursor will move up to the next line. The longer you hold down the mouse button, the more lines the cursor will move up.
2. Let go of the left button on the mouse as soon as the cursor lands on the appropriate line. The list stops scrolling.

You can also move quickly backward or forward along the list:

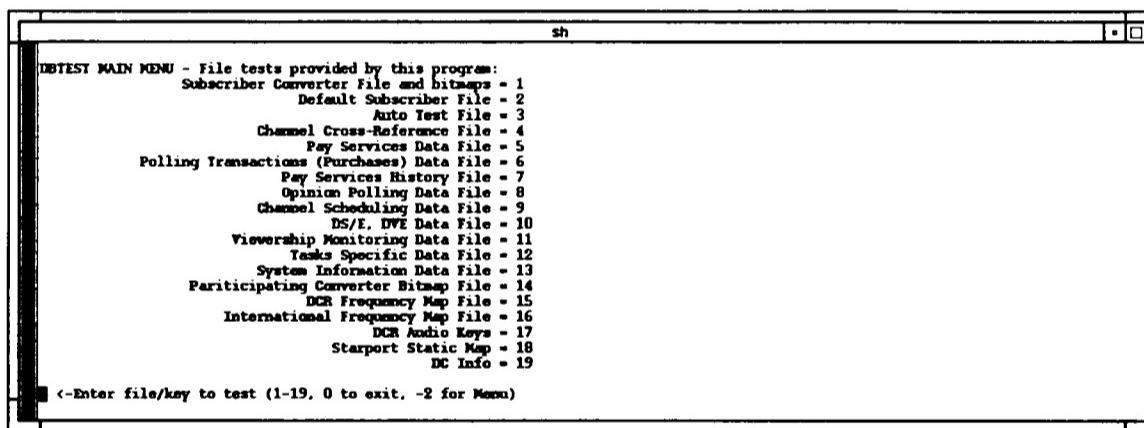
1. Move the cursor arrow over to the rectangular bar between the up and down arrows, and depress the left button on the mouse.
2. Drag the bar up or down along the vertical scroll bar, depending on which direction you wish to go along the list.
3. After the bar is dragged to the intended position, let go of the left button on the mouse. The list is advanced or moved backwards in proportion to the extent to which the bar was moved. Moving the bar a little, for example, moves the list a small amount.

The 132-size, 80-size, and shell windows also allow scrolling. However, the process is somewhat different.

The scrolling region for these screens is on the left of the window, as it is on the Motif windows. But instead of arrows at the top and bottom of the bar and a small rectangular bar between the arrows, there is a shaded area that can move up and down.

### Moving Quickly Along a List

### Using the Scroll Bar in Other Windows



*Scroll bar for other windows*

The shaded area is a proportional area. That is, its length compared to the length of the scrolling region represents the amount of information visible in the screen compared to the amount of information actually accessible. For example, if the shaded area takes up a quarter of the scrolling region, then the information on the screen represents roughly a quarter of the information that can be viewed by scrolling. In the example above, the shaded area fills up the scrolling region; all of the accessible information is visible in the screen.

To move the shaded area or to scroll through the available information:

1. Move the cursor arrow over to the shaded part of the scrolling region, and depress the right mouse button (on a two-button mouse) or the middle mouse button (on a three-button mouse).
2. Drag the shaded area up or down along the vertical scroll bar, depending on which direction you wish to go.
3. After the shaded area is dragged to the intended position, let go of the mouse button. The list moves backwards in proportion to the extent to which the bar moves. Moving the bar a little, for example, moves the list a small amount.

## Quick Navigation Techniques

### Using Quick Navigation

The ACC-4000 allows you to leave any operation or process and quickly go to another area within the program.

Near the top of every Motif screen in the ACC-4000 system the ACC-4000 title appears. By clicking on this title you can access an abbreviated screen of the Main Menu of Screen Options.

To access the abbreviated menu:

1. Click on the ACC-4000 title. A rectangular pop-up box appears with all of the main menu options.
2. Move the arrow cursor down to the option you wish to select.
3. Click the left button on the mouse. The option on the pop-up box is selected. The appropriate menu or screen appears, and you are free to start the next process or operation.

The ACC-4000 abbreviated menu is inactive on the Main Menu of Screen Options and Login screen.

## Help Screens

You can access ACC-4000 on-line help, when it is available, with a single keystroke. The content of the text that appears depends on where in the program you are at the moment. For example, if you are working in the Single Converter Operations screen, and do not understand how to use the UHF Out Channel field, you can use the help feature to learn how.

### Getting Screen and Field Help

*Screen help*      Press the Form Help key (F8)

*Field help*      Press the Field Help key (F7)

If there is more than one screen of help for a particular screen or field item, a colon (:) appears in the lower right hand corner of the help screen. To see an additional help screen:

1. Press the Enter key.
2. When done, press the Enter key again to exit the help function and return to the usual operations mode.

If there is only one screen of help, an (EOF): appears. Press the Enter key to exit from the help screen.

When an operator error occurs, a diagnostic message appears in a small box near the center of the screen. It provides a message explaining the nature of the problem and what should be done. Click on the Continue button to proceed.

If an error occurs while working on a screen, the action required will vary according to the type of error that is made and where the problem occurs:

- If invalid information has been entered, press the F6 key to clear the existing information from the field, and enter the correct data
- If an incorrect button has been pressed, just press the correct button

If you attempted to perform an operation that cannot be performed because of your system's configuration or the information in the database, a diagnostic box could appear. In this case:

- Press the Enter key to return to the screen you were working on

## **Diagnostic Messages**

### **Solving Operator Errors**



## 3 • Converter Operations

Chapters 3, 4, and 5 describe the eight converter operations options that are available through the Converters Menu. The eight operations are grouped in this way:

### Introduction

Chapter 3	Chapter 4	Chapter 5
Toggle Current Operations Mode	Test Converters (not implemented)	<i>Impulse Operations</i> <i>Toggle Current Operations Mode</i>
Toggle Auto Initialize Mode	Quality Control (not implemented)	<i>Display Impulse Operations</i>
Toggle Auto Add Mode	Global Functions	<i>Modem Status Monitoring</i>
Perform Operations <i>Initialize</i> <i>Add/Delete</i> <i>Modify Converter Information</i> <i>Partial Initialize (Reload)</i> <i>Activate</i>		<i>Impulse Parameters</i> <i>Read Operations</i> <i>Data Collection</i> <i>Response Polling</i> <i>Viewership Monitoring/Opinion Poll</i> <i>Change Converter Level</i> <i>Isolate Babbling Converter</i>

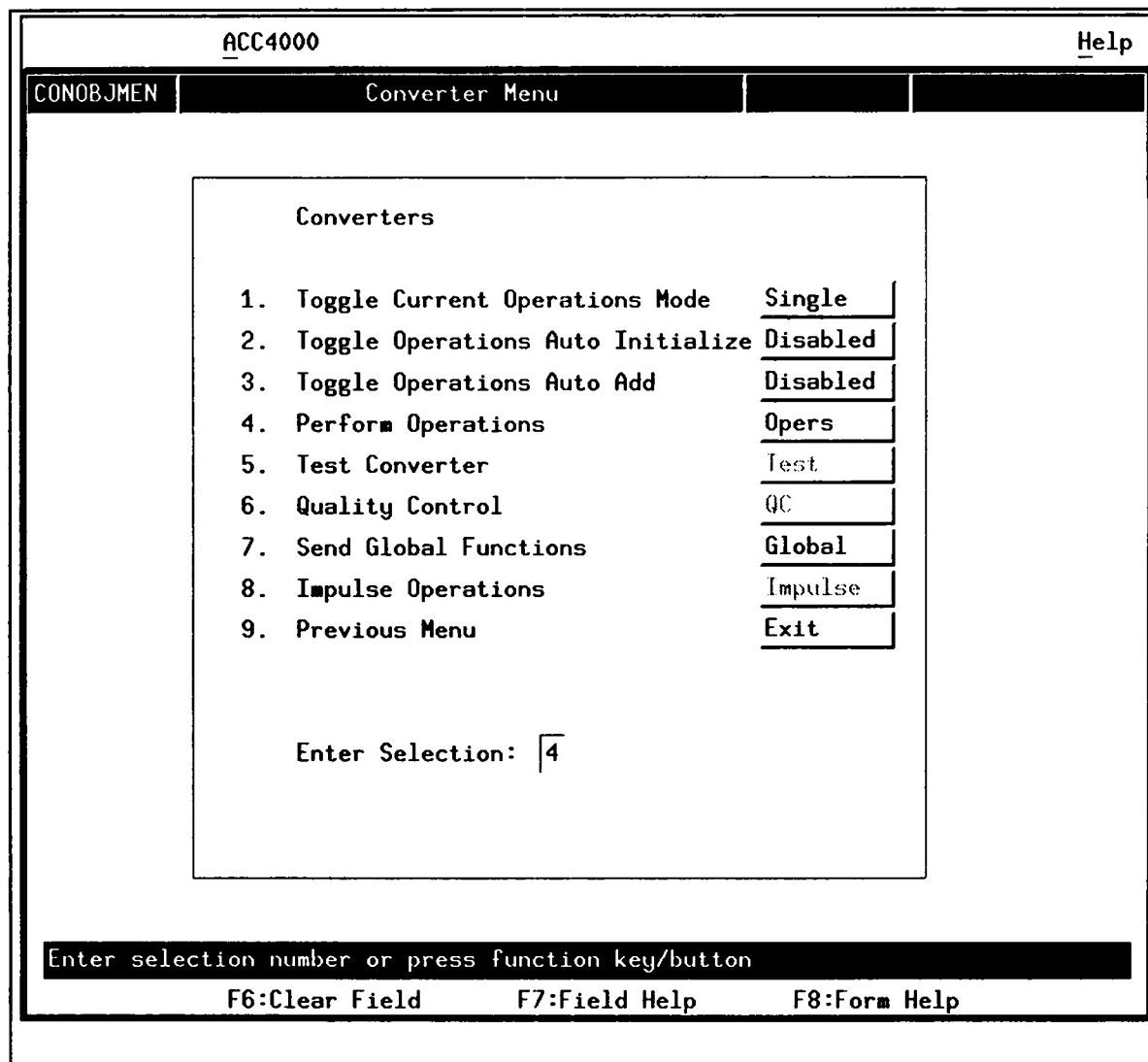
The kinds of converter data you can manipulate depend on what kinds of converters you have and how your system is configured. For example, if you do not have two-way or FONE-way partitions, you do not have access to the Impulse Operations option.

Some screens accessed through the Converters Menu contain fields that represent all the possible features you can select on every converter supported by the ACC-4000; however, depending on what kinds of converters you have, you may not be able to highlight them all.

For information on converter types, including procedures related to converter type defaults and channel maps, turn to *Chapter 8, Converter Types*.

For information on converter reports, turn to *Chapter 13, Reports*.

Access the Converters Menu by choosing the first option on the Main Menu of Screen Options.



*Converter Menu / Converters Menu*

## Current Operations Mode

When working on converter operations, the ACC-4000 can be set to one of two operating modes: *single* or *range*.

The single mode allows you to perform operations on individual converters, one at a time; the range mode allows you to perform operations on a number of converters at once.

Before selecting the Perform Operations option from the Converters Menu, check the status of the Current Operations Mode (Single/Range). This status is shown on the button for the top option of the Converters Menu.

**Single** System is in single mode: all converter operations that can be single or range will apply to a single converter identified by Converter ID, Serial Number, or Account Number.

**Range** System is in range mode: all converter operations that can be single or range will apply to a range of converters identified by Converter Id, Serial Number, Account Number, or partition. A range can include all converters.

When the operation mode is single, these actions can be performed:

- Add a converter
- Select and display a converter
- Change converter information
- Delete a converter
- Initialize a converter
- Partially initialize a converter (reload or refresh)
- Clear keys

When the operation mode is range, these actions can be performed:

- Delete a range of converters
- Initialize a range of converters
- Partially initialize a group of converters (reload or refresh)
- Authorize/Deauthorize a service code

Change the current operations mode by clicking on the button that reads Single or Range. That is, if the button reads Single, click on it to change it to Range.

You can automatically initialize each converter as it is first added to the system's data base. Typically, a system has this feature turned off (disabled).

## Auto Initialize

The current auto initialize status is shown on the button for the second option on the Converters Menu.

**Enabled** Auto initialization is turned *on*: converters are initialized as soon as they are added to the data base.

**Disabled** Auto initialization is turned *off*: you must manually initialize each newly-added converter.

Change the auto initialize mode by clicking on the button that reads Enabled or Disabled.

The auto add feature speeds up the process of adding converters to the data base; when the auto add feature is turned on, you don't have to click on the Add button for each converter. This is particularly useful when a number of converters must be added in a single session.

## Auto Add

The current auto add status is shown on the button for the third option on the Converters Menu.

*Enabled* Auto add is turned *on*: converters can be added to the ACC-4000 data base using a universal bar code reader.

*Disabled* Auto add is turned *off*: a universal bar code reader can still be used to add converters to the data base, but now you have to click on the Add button for each converter.

Change the auto add mode by clicking on the button that reads Enabled or Disabled.

## **Adding a Converter (Single Mode)**

A converter must be added to the data base before operations involving that converter, such as initialization, can be performed. However, it is not necessary for the converter to be physically connected to the cable system in order to be added to the data base.

### **Converter Type Defaults**

To simplify the process of adding information about each converter to the data base, the ACC-4000 provides a template for each converter type. The template automatically displays default information for that converter type.

The templates, however, can be changed. For information about templates and converter defaults, see *Chapter 8, Converter Types*.

### **How to Add a Converter**

When adding a converter to the system, the Converter ID and Serial Number must be entered. Entering a billing Account Number is optional.

Here are descriptions of some of the fields on the Single Converter Operations screen which are important when you add a converter to your system.

*Converter ID* A Converter ID is a 1- to 6-character digit. Its range is from 1 through 518144, excluding the numbers 256001-262144.

Each converter has a unique Converter ID assigned to it when it is added to the data base.

*Serial Num* A Serial Number is a fixed number which is a permanent part of the converter, and can be found on the label that is attached to the bottom of the converter.

*Account Num* An Account Number is a 1- to 12-digit number chosen in accordance with the policies and procedures established by the cable system manager and business system vendor.

<i>Initialized</i>	A single alpha character field that displays an N for no when you click on the Add button to begin adding a converter. This value will change to Y when you initialize the converter.
<i>Responding</i>	A single alpha character field that displays an N for no when you click on the Add button to begin adding a FONE-way or two-way converter. When adding a one-way converter, this field is blank. The value in this field changes to Y when a two-way or FONE-way converter is successfully initialized.
<i>Partition</i>	A single alpha character field that shows the partition type to which the converter has been assigned: O=one-way, T=two-way, P=FONE-way.
<i>Install Date</i>	The Install Date consists of three two-digit integer fields having the format MM/DD/YY where MM is the month, DD is the day, and YY is the year (for example, 01/05/94). When you add a converter, the default date that appears on the screen is the current date.

You will find the other fields on this screen described in *Chapter 8, Converter Types*.

To add a converter to the database:

1. Look at the first option on the Converters Menu to make sure it is in the single mode.
2. Click on the Oper button to select the Perform Operations option. The Single Converter Operations screen appears. The Converter ID field is highlighted, with the cursor at the beginning of the field. Fields may be empty of information, or they may display information about the last converter that was modified or added to the data base.

ACC4000

[Help](#)

<b>SINGLE</b>	<b>Single Converter Operations</b>		
Converter Type: <input type="text"/> Hub code: <input type="text"/> Serial Num: <input type="text"/>		Converter ID: <input type="text"/> Account Num: <input type="text"/>	
Initialized: <input type="checkbox"/> Responding: <input type="checkbox"/> Activate: <input type="checkbox"/> Partition: <input type="checkbox"/> Conv Status: <input type="checkbox"/> Tuning Type: <input type="checkbox"/> Time Out: <input type="checkbox"/> Channel Map: <input type="checkbox"/> Amplifier: <input type="checkbox"/> Time Zone: <input type="checkbox"/> Phone Index: <input type="checkbox"/> Phone Exchg: <input type="checkbox"/> Credit: <input type="checkbox"/> RF Rtrn Lvl: <input type="checkbox"/> M/S Status: <input type="checkbox"/> M/S Code: <input type="checkbox"/> UHF Out Channel: <input type="checkbox"/> Output-Freq Map: <input type="checkbox"/> Aux 12V Opt: <input type="checkbox"/> Install Date: <input type="text"/> Emergency Alert: <input type="text"/>			
Volume Control: <input type="checkbox"/> Last/Fav Channel: <input type="checkbox"/> Time/TCP: <input type="checkbox"/> Output Chan 3 : <input type="checkbox"/> PC Lock: <input type="checkbox"/> PC Morality: <input type="checkbox"/> Data Test : <input type="checkbox"/> Purchases: <input type="checkbox"/> Remote Unit: <input type="checkbox"/>		<b>SERVICES</b> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
<input type="button" value="Add"/> <input type="button" value="Select"/> <input type="button" value="Change"/> <input type="button" value="Delete"/> <input type="button" value="Init"/> <input type="button" value="Reload"/> <input type="button" value="Clrkeys"/> <input type="button" value="Accept"/> <input type="button" value="Cancel"/> <input type="button" value="Zoom"/> <input type="button" value="Exit"/>			
Press the Add or Select function key/button to proceed			
<input type="button" value="F6:Clear Field"/> <input type="button" value="F7:Field Help"/> <input type="button" value="F8:Form Help"/>			

*Single Converter Operations screen*

3. Click on the Add button located along the Action bar near the bottom of the screen. Information about the last converter that was added or modified disappears, and information about the default converter type appears. More information about default converter types can be found in *Chapter 8, Converter Types*.
4. If necessary, change the Converter Type. The number in the Converter Type field is the default established for your system. If the converter you are adding is a different type, click on the Converter Type field, press F6 to clear the information, and type in the correct Converter Type. Or click on the Zoom feature to select another converter type.
5. If necessary, assign the converter a Converter ID. The next available Converter ID automatically appears in the Converter ID field, and the Serial Number field is highlighted.  
  
If you choose to enter a Converter ID number other than the one on the screen, click on the Converter ID field, press F6 to clear the number, and type in a new number.
6. Enter the converter's Serial Number.

7. Optionally, click on the Account Number field and enter the Account Number for that converter.
8. If you choose to change the Hub code, click on the field and enter a new number.
9. Look at the information displayed on the current screen. If you need to make changes, simply click on the field you want to change, press the F6 key to delete the old information, and then enter the new.
10. Click on the Accept button along the Action bar. Information about this converter is added to the data base. A dialog box appears asking if you wish to initialize this converter.
11. Click on the Yes button to initialize the converter, click on No if you do not want to initialize the converter at this point. The dialog box disappears and the converter is or is not initialized depending upon your selection. If you choose to initialize the converter, a second dialog box appears after the initialization punch.
12. Click on Continue to proceed. When the second dialog box disappears, you can continue working on converter information or you can move to some other part of the program.

For complete descriptions of other fields that appear in the central area of the Single Converter Operations screen, turn to *Chapter 8, Converter Types*.

Adding a converter and changing one require the same screen: Single Converter Operations. You can modify any information on this screen except the Converter ID, Serial Number, Initialized, Responding, and Partition fields.

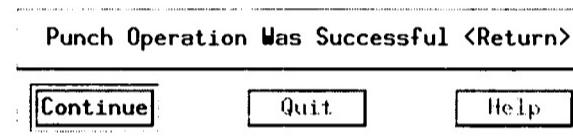
To change converter information, follow steps 1 and 2 under *Adding a Converter (Single Mode)*, then:

1. Click on the Select button along the Action bar near the bottom of the screen. A blank Single Converter Operations screen now appears, and the Converter ID field is highlighted.
2. Remain on the Converter ID field, or tab over to the Serial Number or Account Number field, depending upon which you will use to identify the converter.
3. Enter the Converter ID, Serial Number, or Account Number, and then click on the Accept button. Information for the converter you choose appears in the fields on the screen.

## **Changing Converter Information (Single Mode)**

All of the left Action buttons near the bottom of the screen are now enabled, depending on your operator privilege. For information on operator privileges, see *Chapter 11, User Information*.

4. Click on the Change button along the Action bar.
5. Use the Tab key to move the cursor to the first field where you wish to change information.
6. Press the F6 key to clear the field, then type in the new information.
7. Continue this process of moving to a field and entering new information until you have entered all the new information for that converter.
8. Click on the Accept button. A dialog box appears indicating that the punch operation following the converter modification was successful and that the data base was updated accordingly.



9. Press the Continue button.

#### **Activating/Deactivating a Converter**

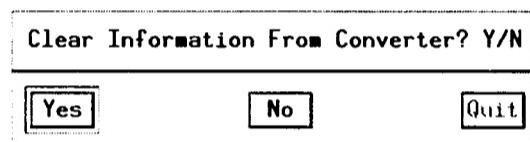
To change the active status of a converter, modify the Activate field on the Single Converter Operations screen. The active status can be only Y (yes) or N (no).

When you delete a converter from the data base, the information in the converter is erased and the converter becomes unusable.

A converter must be physically connected to the system in order to clear its information and settings.

From the Single Converter Operations screen:

1. Click on the Select button along the Action bar near the bottom of the screen.
2. Enter the Converter ID, Serial Number, or Account Number, whichever is appropriate, and then click on the Accept button. All of the left Action buttons near the bottom of the screen are enabled.
3. Click on the Delete button along the Action bar. A dialog box appears asking if you wish to clear information from the converter.



4. Click on the Yes button. A second dialog box appears asking if you are sure that you want to delete the converter.
5. Click on the Accept button in this dialog box, if you really wish to delete the converter. The converter has now been deleted from the ACC-4000 data base, and a blank Single Converter Operations screen appears.

A converter which has been added to the system must be initialized before it can access cable services. Initializing a converter sends it these parameters:

- Converter ID
- Site code
- Channel/frequency map
- Converter defaults present in the Default Converter Information screen (see *Chapter 8, Converter Types*)

In addition, if the converter's status is active, initializing sends the converter its authorized services.

A converter should be initialized only once. If you need to change some of its parameters, such as parental control or timeout for example, simply make the changes on the Single Converter Operations screen and click on Accept. Or, if a converter has been

## **Deleting a Converter (Single Mode)**

## **Initializing a Converter (Single Mode)**

without power for some time, and some of its functions seem to be incorrectly working, reload it as described in the following section.

For a converter to be initialized, it must be powered up and physically connected to the cable system. Once initialized, the converter retains its operating parameters as long as it remains in proper working condition.

To initialize an individual converter, begin in the Single Converter Operations screen by selecting and then accepting the converter you want to initialize. Then:

1. Click on the Init button along the Action bar. If the converter is already initialized, a dialog box appears asking if you want to initialize it again. Remember that if you do initialize at this point, and this converter is a two-way or FONE-way converter, you will lose all uncollected purchases and you will clear parental and purchase control keys as well.

If the converter is not initialized, a dialog box appears announcing that the specified converter has been initialized.

2. Press the appropriate button in either dialog box. The Single Converter Operations screen reappears.

## **Reloading a Converter (Single Mode)**

Reloading, also called partially initializing or refreshing, allows the functional parameters within the converter to be re-initialized without losing purchase information or parental and purchase control keys.

To reload a converter:

1. Access the Single Converter Operations screen.
2. Select and accept the converter you want to reload.
3. Click on the Reload button at the bottom of the screen. A dialog box appears announcing that the converter has been reloaded.
4. Press the Continue button in this box to proceed.

Many customers use the four-digit, personal information number (PIN) feature to control viewing and purchase activity in their homes. Although you do not have access to customers' PINs, you can clear these four-digit key sequences from the converter.

## Clearing Converter Keys (Single Mode)

- Click on the Clrkeys button.

A small screen appears near the bottom of the screen. For the converter you selected, you can now click on the:

- Control key to clear parental control PINs
- Event key to clear purchase PINs
- Both key to clear both parental control and purchase PINs

Converter Type: 8	Hub code: 1	Converter ID: 65551													
Serial Num: J6E4038608	Account Num: 5C														
Initialized: Y	Responding: Y	Activate: Y	Partition: P												
Conv Status: <input type="checkbox"/>	Tuning Type: S	Time Out: 380	Channel Map: 2												
Amplifier: <input type="checkbox"/>	Time Zone: 0	Phone Index: 1	Phone Exchg: 1												
Credit: 16	RF Rtrn Lvl: <input type="checkbox"/>	M/S Status: <input type="checkbox"/>	M/S Code: <input type="checkbox"/>												
UHF Out Channel: <input type="checkbox"/>	Output-Freq Map: <input type="checkbox"/> - <input type="checkbox"/>	Aux 12V Opt: <input type="checkbox"/>													
Install Date: 12/09/93	Emergency Alert: <input type="checkbox"/> - <input type="checkbox"/> - <input type="checkbox"/> - <input type="checkbox"/>														
Volume Control: Y	Last/Fav Channel: N	Time/TCP: Y													
Output Chan 3 : <input type="checkbox"/>	PC Lock: Y	PC Morality: <input type="checkbox"/>													
Data Test : <input type="checkbox"/>	Purchases: Y	Remote Unit: Y													
<table border="1"> <tr> <td>Clear Control</td> <td>Key</td> <td>Press Accept</td> <td>to initiate operation</td> </tr> <tr> <td>Clear Event</td> <td>Key</td> <td>Press Cancel</td> <td>to clear options</td> </tr> <tr> <td>Clear Both</td> <td>Key</td> <td>Press Exit</td> <td>to return. <input type="checkbox"/></td> </tr> </table>				Clear Control	Key	Press Accept	to initiate operation	Clear Event	Key	Press Cancel	to clear options	Clear Both	Key	Press Exit	to return. <input type="checkbox"/>
Clear Control	Key	Press Accept	to initiate operation												
Clear Event	Key	Press Cancel	to clear options												
Clear Both	Key	Press Exit	to return. <input type="checkbox"/>												
<input type="checkbox"/> F6:Clear Field <input type="checkbox"/> F7:Field Help <input type="checkbox"/> F8:Form Help															

*Clear Converter Keys screen*

- Click on the Accept button to begin this clear operation. A message appears stating that the selected key was successfully cleared.
- Click on the Continue button to proceed. The Single Converter Operations screen reappears. You are now free to continue to work on converter information or move to another part of the ACC-4000 system.

## Range Functions

Many ACC-4000 operations are performed on a range of converters. A *range* is a set of converters in a definable sequence, such as all the converters between two Converter ID numbers.

There are several ways to specify a converter range. You can select converters by:

- Converter ID
- Serial Number
- Account Number
- Data base partition
- Entire data base (All)

## Selecting a Range

Regardless of where in the ACC-4000 system you are asked to specify a range of converters, the same general procedure is used:

1. On the Converters menu, set the Toggle Current Operations Mode button to Range.
2. Click on the Opers button to select the Perform Operations option. If no Range is currently active, the system displays the Select Converter Range screen (shown below). If a range is active, the system displays the selected range on the Range Operations screen (illustrated on page 13).

1	0_WAY	2	0_WAY	3	NUSED	4	NUSED	5	NUSED	6	NUSED	7	NUSED	8	NUSED
9	NUSED	10	NUSED	11	NUSED	12	NUSED	13	NUSED	14	NUSED	15	NUSED	16	NUSED

Select Converter Range screen

If the range indicated on the screen is the range you wish to work on, proceed to *Deleting a Range of Converters* on page 15. If you want to define some other range, perform the following steps.

You can create ranges defined by Converter ID, Serial Number, or Account Number. While the Select Converter Range screen is on the screen:

### Specifying a Range

1. Click on the Range button near the top of the screen. The Range button is now highlighted.
2. Click on the Converter ID, Serial Number, or Account Number buttons, depending upon how you wish to identify a range of converters. The button you selected is now highlighted, and the cursor moves to the field in which you enter the first number in the range.
3. Type in the first number in the range, then press the Tab key. The field for the last number in the range is now highlighted.
4. Type in the last number in the range.
5. Click on the Accept button. The Range Operations screen appears.

RANGE	
Converter ID:	<input type="text" value="65537"/> TO <input type="text" value="65600"/>
Serial No:	<input type="text"/> TO <input type="text"/>
Account No:	<input type="text"/> TO <input type="text"/>

Press an action key/button then the Accept key/button to proceed

F6:Clear Field F7:Field Help F8:Form Help

Range Operations screen by converter

**Selecting By Partition**

You may want to perform an operation, such as a nonresponding poll or a purchase collection, on all converters in a two-way or FONE-way partition.

To do this while the Select Converter Range screen is displayed:

1. Click on the Partition button near the center of the screen. The partition now is highlighted. The partitions are listed along two horizontal rows. Many of the partitions will be labeled NUSED, which stands for Not Used. These may be ignored.

Partitions that are used are a different color and are labeled O\_WAY (for one-way converters), T\_WAY (for two-way converters) or P\_WAY (for FONE-way converters).

All active partitions are initially considered to be part of the selected range. This means if you do not wish to include a partition you must deselect it.

2. Click on an active partition if you do not wish the converters in this partition to be part of the range. The selected partition now turns the same color as the unused partitions.
3. Click on the Accept button. The Range Operations screen appears.

1 O_WAY	2 T_WAY	3 P_WAY	4 O_WAY	5 T_WAY	6 T_WAY	7 P_WAY	8 O_WAY
9 NUSED	10 NUSED	11 NUSED	12 NUSED	13 NUSED	14 NUSED	15 NUSED	16 NUSED

PARTITION

Select      Delete      Init      Reload      Auth      DeAuth      Accept      Cancel      Exit

Press an action key/button then the Accept key/button to proceed

F6:Clear Field      F7:Field Help      F8:Form Help

*Range Operations screen by partition*

To include all converters in a range while the Select Converter Range screen is displayed:

1. Click on the All box in the lower portion of the screen. The All box is highlighted.
2. Click on the Accept button. The Range Operations screen appears, with All selected.
3. Begin the operation you want to perform on the range you have just defined. For example, you would click on the Delete button if you now wanted to delete the range of converters.

Click on the Select button while the Range Operations screen is displayed.

The Select Converter Range screen appears.

Define the range of converters you want to delete. Then, from the Range Operations screen:

1. Click on the Delete button. All of the buttons to the left of the Delete button are temporarily disabled.
2. Click on the Accept button. A dialog box appears asking you to confirm that you wish to delete the selected range of converters.
3. Type Y and press the Enter key. A small Cancel Operation dialog box is superimposed over the top of the screen while the ACC-4000 performs the operation on the selected range. You can click on the Cancel Operation button at any time to end the deletion operation.

The Range Results screen appears on the lower half of the screen showing the total numbers of converters:

- For the range operation
- Successfully deleted
- Failed to be deleted
- Not connected
- Locked (currently accessed by another operator)

## Selecting All Converters

## Selecting a Different Range

## Deleting a Range of Converters

ACC4000

Help

RNGRSLT	Range Results	
---------	---------------	--

**RANGE**

Converter ID:	12	TO	13	
Serial No:	TO			
Account No:	TO			

Total Converters For Range Operation:

Total Successful Deletions	2			
Total Failed Deletions	0			
Total Not-connected Converters	0			
Total Locked Converters	0			

Exit

F6:Clear Field      F7:Field Help      F8:Form Help

*Range Results screen*

4. Click on the Exit button, and you are returned to the Range Operations screen. You can now remain on this screen to define another range or press the Exit button to go back to a previous screen.

## Initializing a Range of Converters

Define the range of converters you want to initialize. Then, from the Range Operations screen:

1. Click on the Init button. All of the buttons to the left of the Init button are temporarily disabled.
2. Click on the Accept button. A small Cancel Operation dialog box is superimposed over the top of the screen while the ACC-4000 performs the operation on the selected range. You can click on the Cancel Operation button at any time to abort the initialization operation.

The Range Results screen appears on the lower half of the screen showing the total number of converters:

- For the range operation
  - Successfully initialized
  - Failed to be initialized
  - Not connected
  - Locked (currently accessed by another operator)
3. Click on the Exit button, and you are returned to the Range Operations screen.
  4. Press the Exit button to go back to the Converters Menu.

Using the normal initialization procedure causes any uncollected purchases to be lost. To avoid this problem, use the Reload (also called partially initialize or refresh) feature. Reloading allows the functional parameters within the converter to be re-initialized without losing purchase information.

A reload clears personal information numbers, or PINs (see *Clearing Converter Keys* on page 11), and favorite channel mapping.

Define the range of converters you want to initialize. Then, from the Range Operations screen:

1. Click on the Reload button. All the buttons to the left of the Reload button are temporarily disabled.
2. Click on the Accept button. A small Cancel Operation dialog box is superimposed over the top of the screen while the system performs the operation on the selected range. You can click on the Cancel Operation button at any time to end the reloading operation.

The Range Results screen appears on the lower half of the screen showing the total numbers of converters:

- For the range operation
  - Successfully reloaded
  - Failed to be reloaded
  - Not connected
  - Locked (currently accessed by another operator)
3. Click on the Exit button and you are returned to the Range Operations screen. You can now remain on this screen to define another range, or press the Exit button to go back to a previous screen.

## Reloading a Range of Converters

## **Authorizing or Deauthorizing a Range of Converters**

To authorize or deauthorize a service code for a range of converters, first define the range of converters you want to initialize. Then, from the Range Operations screen:

1. Click on the Auth or DeAuth button.
2. Enter the Service Code you want to authorize or deauthorize for this converter range.
3. Click on the Accept button.

A small Cancel Operation dialog box is superimposed over the top of the screen while the system performs the operation on the selected range. You can click on the Cancel Operation button at any time.

While the authorization operation is in progress, the Status line at the bottom of the screen displays result information about each Converter ID in the range you selected.

When the operation is complete, the Range Results screen appears. It displays the total number of converters:

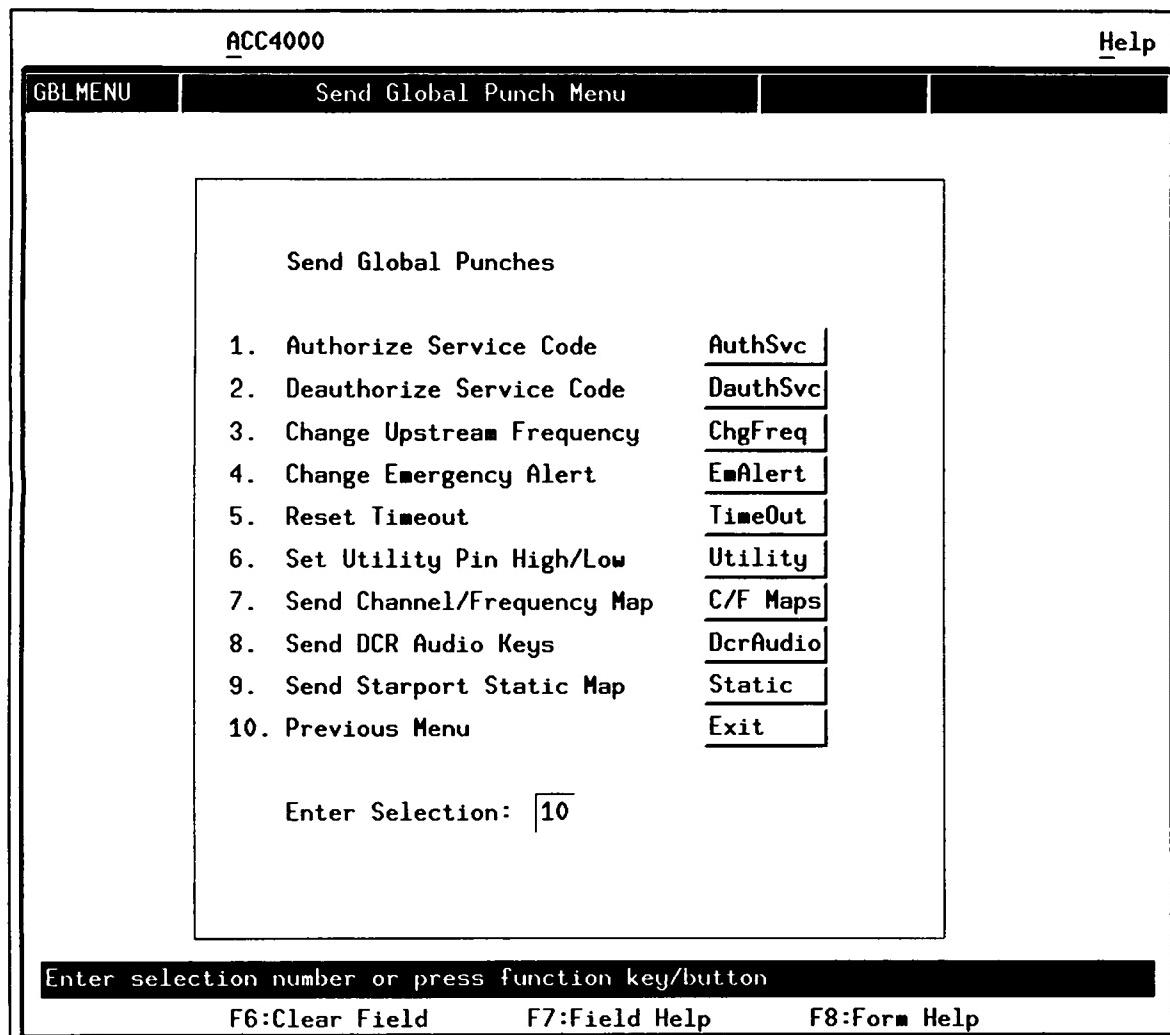
- For the range operation
  - Successfully authorized or deauthorized
  - Failed to be authorized or deauthorized
  - Not connected
  - Locked (currently accessed by another operator)
4. Click on the Exit button and you are returned to the Range Operations screen. You can now remain on this screen to define another range, or press the Exit button to go back to a previous screen.

## 4 • Send Global Functions

A global function is an operation that has a system-wide effect: it sends a punch to **all** converters on the cable company's system.

**Performing any of these operations can have a serious impact on your system. Use them only when recommended by General Instrument personnel.**

To access all global functions, select the Send Global Functions option from the Converters Menu.



*Send Global Punch Menu / Send Global Punches Menu*

When you send a global punch through any of the nine operations accessed from this menu, a status line displays the message "Communicating with the converter(s)...please wait." After a few moments, a dialog box displays the result of the operation you just performed. When this dialog box appears, simply click on the Continue button to proceed.

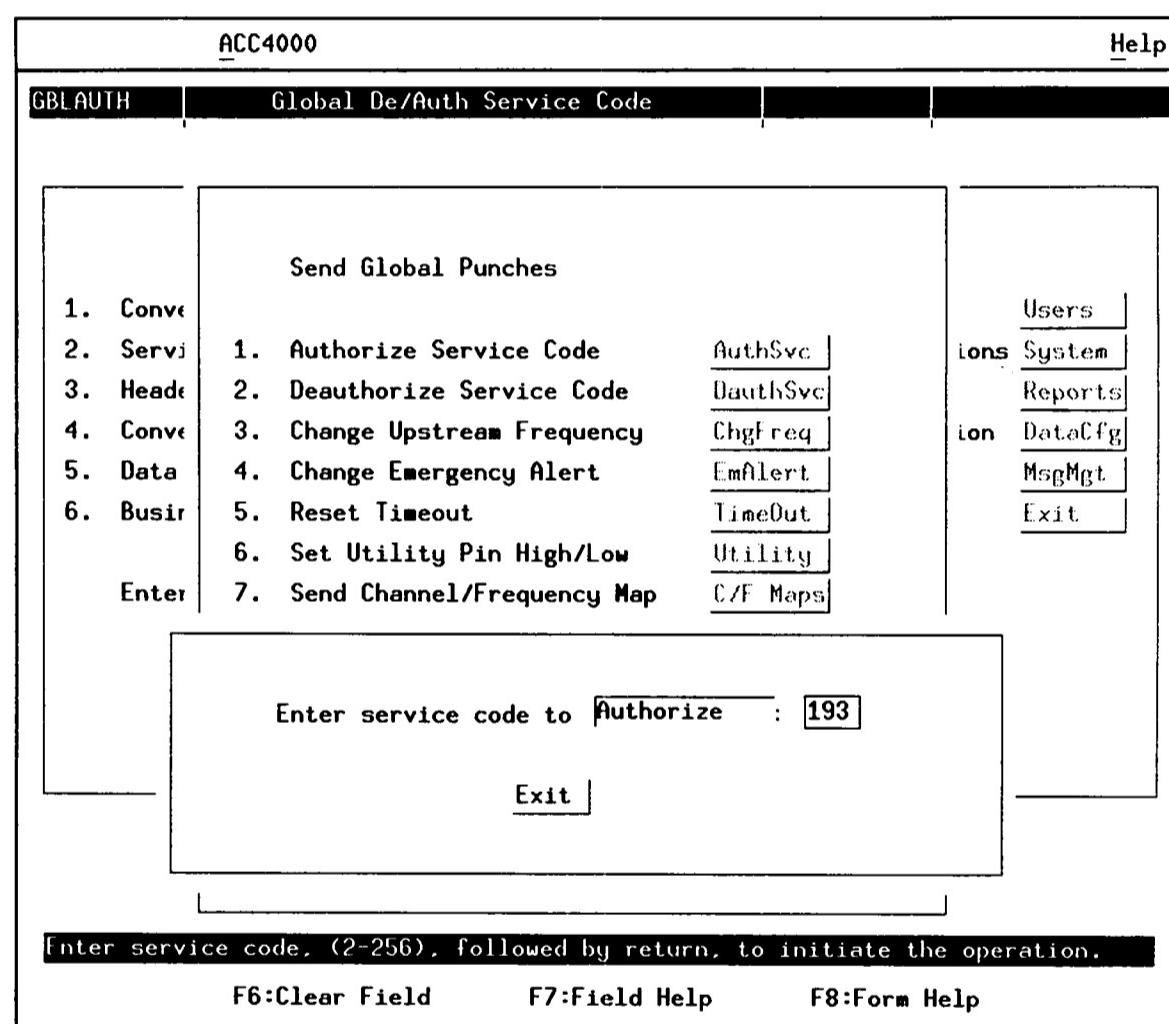
## Authorizing a Service Code

The Authorize Service Code option transmits authorizations to all the converters on the system.

A global Service Code authorization changes information in the converter but not in the data base. Therefore, when the data cycle update occurs, converters are reset to the status they had prior to the global authorization.

To authorize a Service Code:

1. Select the Authorize Service Code option on the Send Global Punches Menu. The Global De/Auth Service Code screen appears.



*Global De/Auth Service Code screen*

2. Type the Service Code you want to authorize and then press the Enter key. Valid Service Codes are from 1 through 256. To cancel this operation, click on the Exit button at any time **before** you press the Enter key.

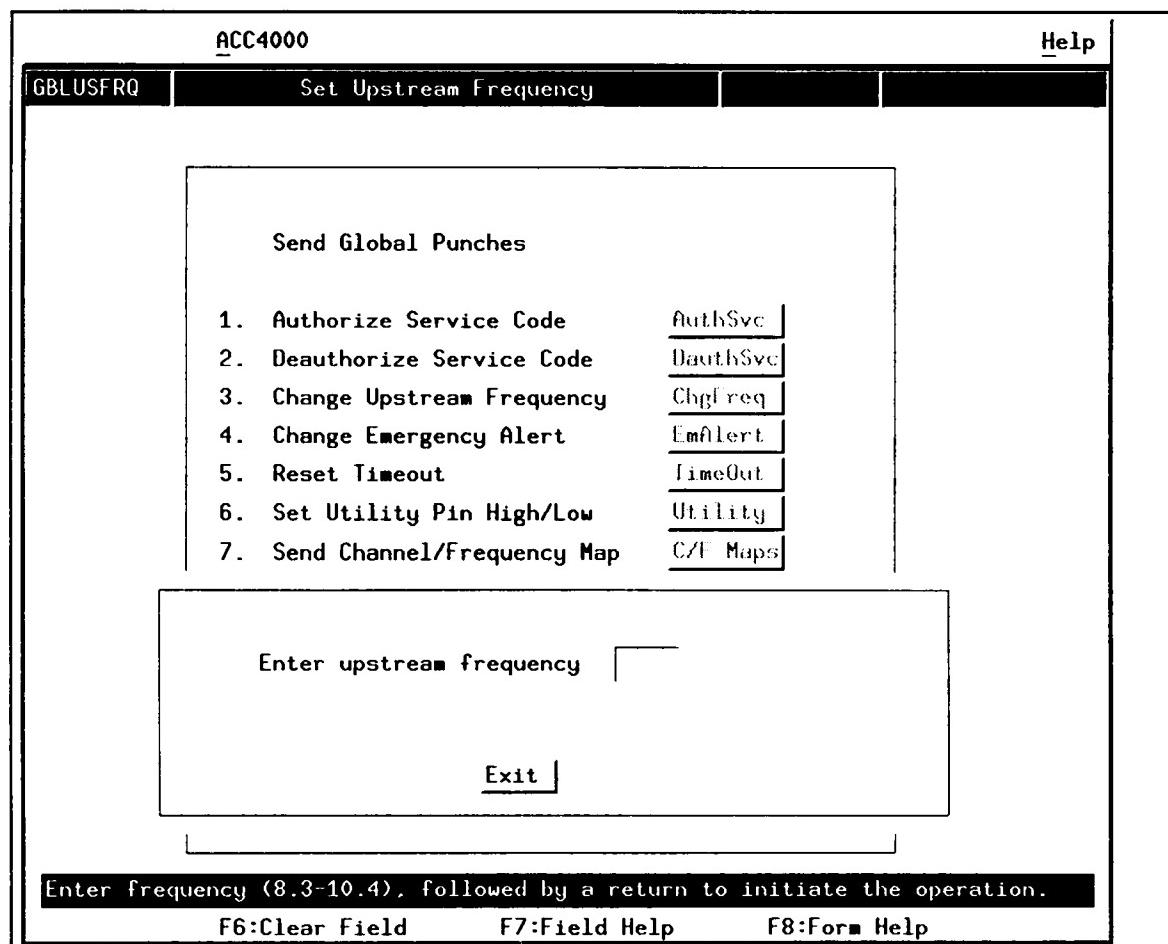
The ACC-4000 automatically deauthorizes pay-per-view Service Codes. Therefore, the only time you need to use this global option is when General Instrument personnel recommend that you do so. Remember that this global punch is sent to all converters on your system.

To deauthorize a Service Code globally, select the Deauthorize Service Code option on the Send Global Punches Menu, type the Service Code, and press the Enter key. You can cancel this operation by clicking on the Exit button at any time **before** you press the Enter key.

The upstream, or return, frequency is the frequency at which converters respond to the controller. To see the current upstream frequency value for your system, look at the Return Frequency field in the Login screen.

The upstream frequency value, falling in a range of 8.3 through 10.4 MHz, is usually established in the data base by the system configuration file. However, on rare occasions it may be necessary to change this setting.

To change the upstream frequency:



*Set Upstream Frequency dialog box*

## Deauthorizing a Service Code

## Changing Upstream (Return) Frequency

1. Select the Change Upstream Frequency option on the Send Global Punches Menu. The Set Upstream Frequency dialog box appears near the bottom of the screen.
2. Type the upstream frequency value and press the Enter key. To cancel this operation, click on the Exit button at any time before you press the Enter key.

## Changing the Emergency Alert

The Change Emergency Alert option applies only to type 5 (STARCOM 5 or XT5) converters. If these converters are a part of your system and you also need help with this option, call 1-800-537-7653.

## Resetting the Timeout

Usually, the Reset Timeout function is performed automatically as a background task when purchases are collected. However, at times it may not be possible to collect purchases on the normal schedule.

To reset the timeout counter:

1. Select the Reset Timeout option from the Send Global Punches Menu. A dialog box appears asking you to confirm that you want to initiate the reset timeout.
2. If you do, click on Yes. If you change your mind, click on No.

## Set Utility Pin High/Low

It is unlikely that your system supports converters that require a utility pin setting. However, if the converters on your system require this function and you also need assistance with this global punch, call 1-800-537-7653.

## Sending a Channel/ Frequency Map

If your cable system has more than one channel map in use, do not send a channel map this way unless you specifically wish that all converters in the system have this channel map.

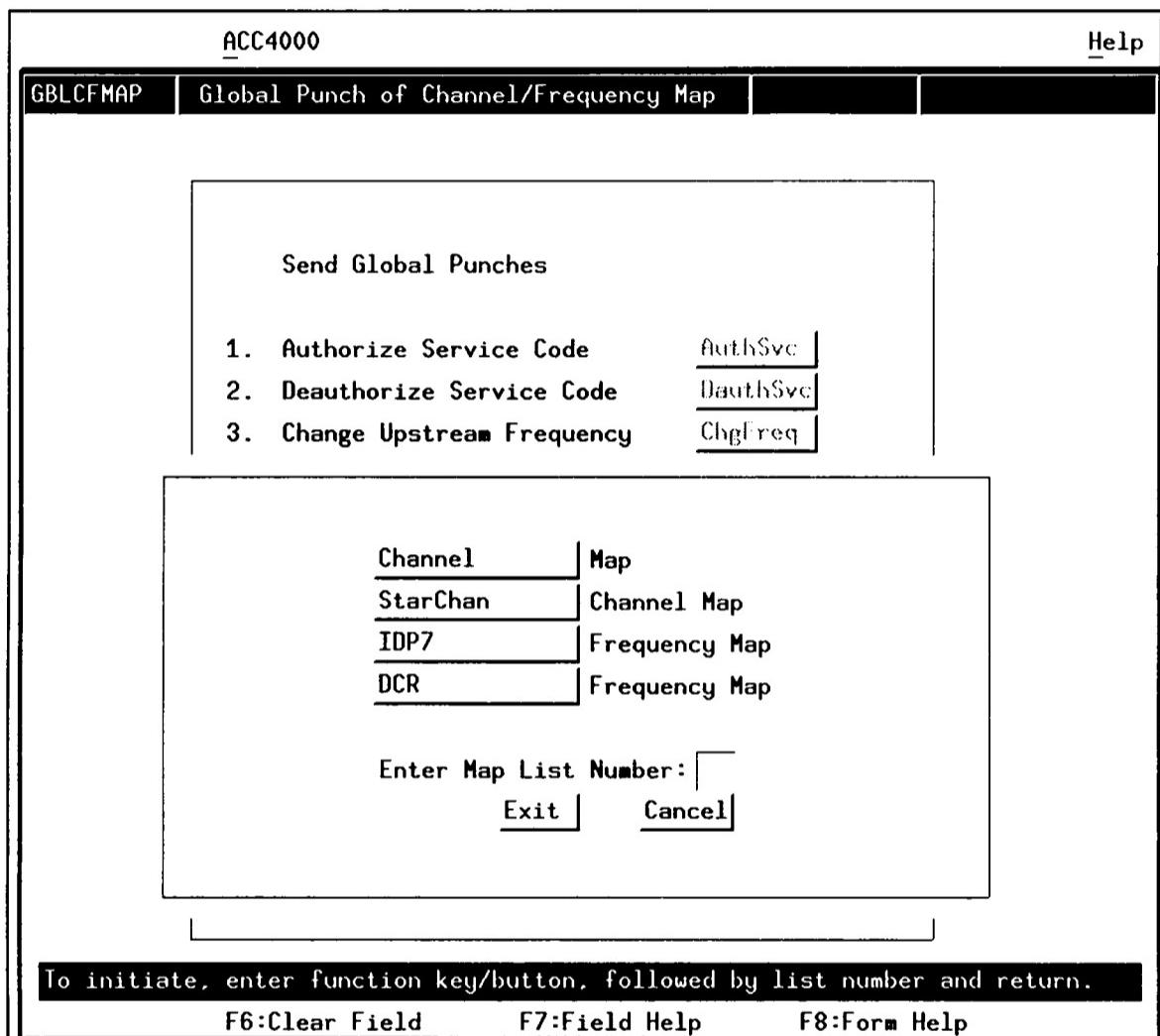
Although transmitting a channel or frequency map is part of the initialization process, global transmissions may be necessary at other times. For example, you may need to transmit a modified channel map to the converter population, and, at the same time, retain any purchase information that is stored in the converters. Although initializing converters transmits a modified channel map, it also erases stored purchases. To update a channel or frequency map without erasing stored purchases, send the map globally.

Please note that there are other ways to send a channel map. Reloading a converter (see *Chapter 3, Converter Operations*) sends a channel cross reference map, and you can also send maps through the DBPUNCH Utility or the XREFUTIL Utility (see *Chapter 12, Control and Configuration Utilities*).

For more information on accessing and modifying channel maps, see *Chapter 8, Converter Types*.

To transmit a channel or frequency map globally:

1. Select the Send Channel/Frequency Map option on the Send Global Punches Menu. The Global Punch of Channel/Frequency Map screen appears. To cancel this operation, click on the Exit or Cancel buttons at any time **before** you press the Enter key.



*Global Punch of Channel / Frequency Map screen*

2. Click on the channel map type you wish to transmit:
  - Channel map
  - STARPORT channel map
  - IDP7 frequency map
  - DCR frequency map
3. Type the number of the map to be sent and press the Enter key.
4. Click on the Continue button.
5. Click on the Exit button.

## **Sending DCR Audio Keys**

The Digital Cable Radio (DCR) Audio Keys value, when sent to DCR converters, allows them to decipher DCR audio. When you select this option, the system sends the audio keys value from the Audio Key table to the converters.

1. Select the Send DCR Audio Keys option on the Send Global Punches Menu.
2. Click on the Continue button.

## **Sending a STARPORT Static Map**

To send a STARPORT Static Map:

1. Select the Send STARPORT Static Map option on the Send Global Punches Menu.
2. Click on the Continue button.

For more on sending channel and frequency maps globally, turn to page 4.

## 5 • Impulse Operations

The Impulse Operations option is available to you only if you have FONE-way or two-way converters on your system. If your system has neither, this option is disabled.

Impulse operations allow you to command two-way and FONE-way converters to send pay service purchase information back to the controller, to view ongoing collection and polling processes, and to run routines that help determine where problems might be when you are having trouble with your converters and phone lines. You can perform these operations:

### Operation

*Collect single and range purchase information from FONE-way and two-way converters.*

*Monitor the purchase collection process involving FONE-way single and range collections and two-way range collections.*

*Display the results of the last data collections performed on both FONE-way and two-way converters.*

*Initiate two-way response polling to find out the number of converters that are or are not communicating with the controller.*

*Initiate FONE-way response polling to find out the number of converters that are or are not communicating with the controller.*

*Initiate viewership monitoring and opinion polling on two-way converters.*

*Monitor two-way polling and viewership monitoring processes.*

*Display the results of the last response polling processes.*

*Identify and control FONE-way and two-way converter activities and functions.*

### Menu Selection

Data Collection.

Display Impulse Operations, then Display Current Operations.

Display Impulse Operations, then Display Data Collection Range Results.

Response Polling, then Poll Two-way Converter Partitions.

Response Polling, then Poll Telephone Converter Partitions.

Viewership Monitoring / Opinion Poll.

Display Impulse Operations, then Display Current Operations.

Display Impulse Operations, then Display Response Polling Results.

Impulse Parameters.

### Before You Begin

### Operations You Can Perform

*Read purchase information, authorizations, and parameters stored in a given converter.*

Read Operations.

*If you are having data collections problems, check the status of your system's FONE-way modems.*

Modem Status Monitoring.

*Find out if an individual converter's modem is functioning properly.*

Read Operations, then Test Phone Communications.

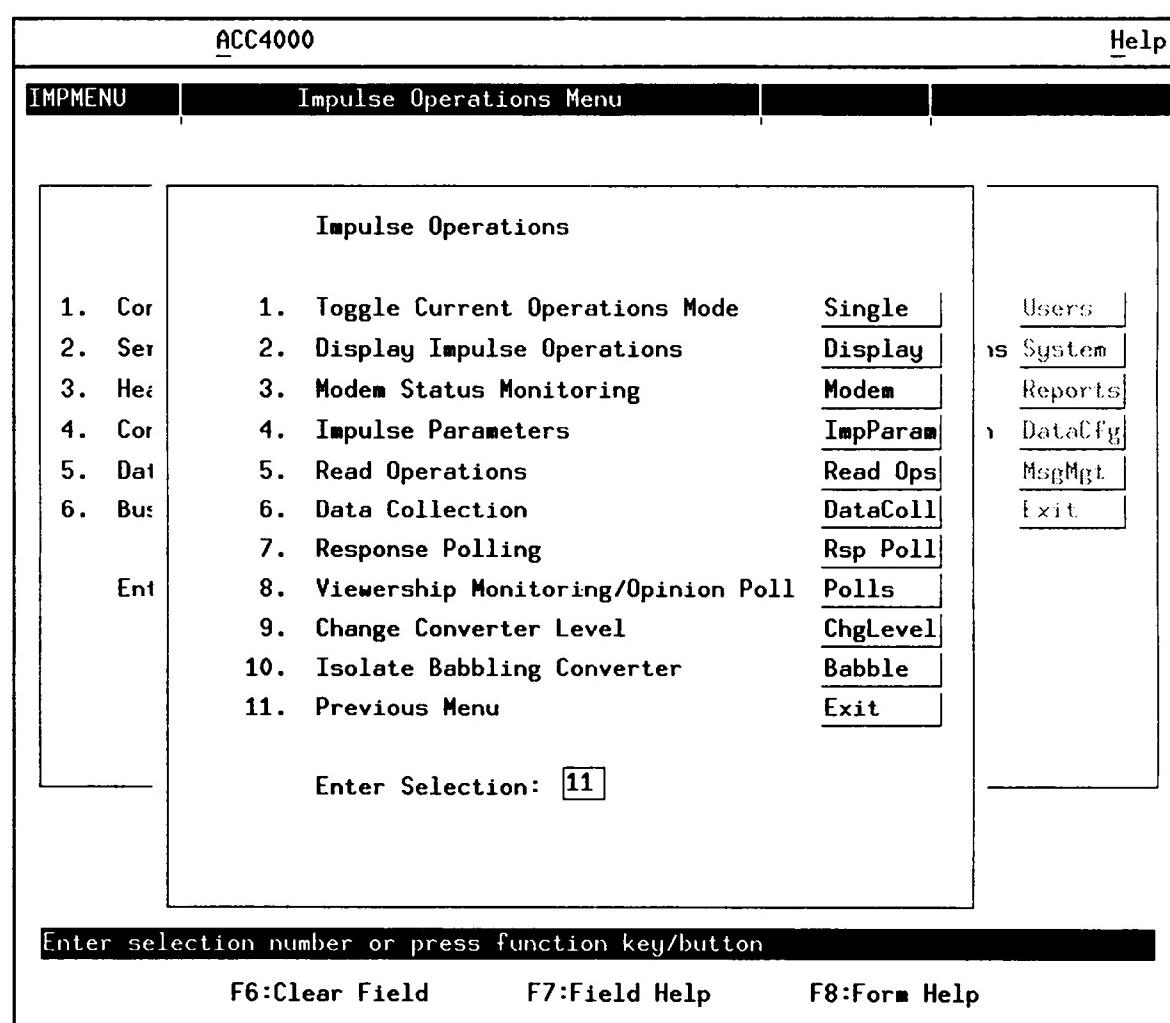
*Adjust a single, two-way converter's upstream frequency and operating level.*

Change Converter Level.

*If you suspect that there is a two-way converter on your system that is creating enough noise upstream to prevent accurate data collection, you can isolate it.*

Isolate Babbling Converter.

From the Converter Menu, select Impulse Operations.



*Impulse Operations Menu*

The ACC-4000 updates several impulse operations screens with current information from whatever operation is in progress; updates occur approximately every 60 seconds. These kinds of screens also let you view updated, current information on demand by clicking on the Refresh button that each of them displays.

**We recommend that you do not keep these screens active for long periods of time. They consume valuable resources and can slow down your system's performance.**

After you view the information that is important to you, exit from the screen. You can always bring the screen back at another time.

The Data Collection option on the Impulse Operations Menu lets you choose to collect purchase data for a single converter or for a range of converters. Click on the button opposite the Toggle Current Operations Mode option until it displays either Range or Single. Then, when you select the Data Collection option, it will be ready for you to enter information for either a single converter or a range of converters.

Display impulse operations when you want to observe the FONE-way and two-way events that are presently occurring in your system. Also, use this feature to display the results of the last range data collection and response polling processes, even if those processes occurred before your system was last rebooted.

Specifically, you can select:

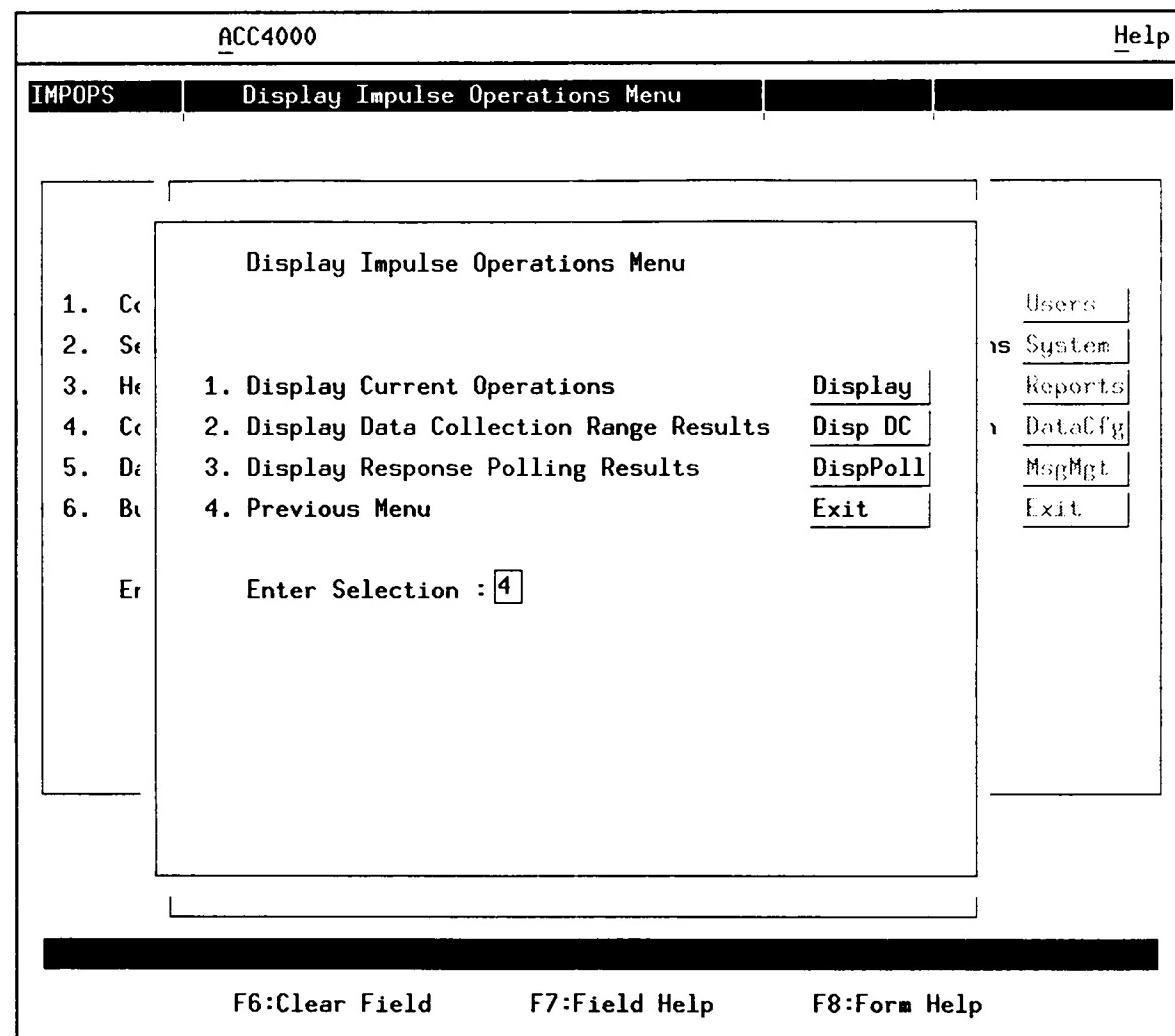
- |                                      |  |
|--------------------------------------|--|
| <i>Current operations</i>            | Take a look at the FONE-way and two-way operations that are in progress.   |
| <i>Data collection range results</i> | Look at the results of the last data collection, recovery data collection, and background data collection performed on both FONE-way and two-way converters. |
| <i>Response polling results</i>      | Find out how many FONE-way and two-way converters are responding or failing to respond to the controller.  |

## About Screens That Can Be Refreshed

## Choosing the Single or Range Current Operations Mode

## Displaying Impulse Operations

From the Impulse Operations Menu, select the Display Impulse Operations option.



### *Display Impulse Operations Menu*

#### **Displaying Current Operations**

You can look at a variety of information about FONE-way and two-way operations that are in progress. Information is displayed on the Display Current Operations screen and is organized into three general categories:

- Operations performed on single FONE-way converters
- Operations performed on ranges of FONE-way converters
- Operations on two-way converters

Select the Display Current Operations option on the Display Impulse Operations Menu.

Operation	STATUS	VERIFY PROGRESS
Automatic Initiated Non-Responding Poll	Inactive	[ ] [ ]
NONE		[ ] [ ]
NONE		[ ] [ ]

*Display Current Impulse Operations / Display Current Operations screen*

The Display Current Operations screen appears, showing the status of impulse operations in progress. All current operations appear on this screen, whether they have been automatically generated or manually initiated.

If your system has no FONE-way partition, the FONE-way area of the screen will be partly covered by an appropriate message; if there are no two-way partitions, the two-way area will also display an appropriate message.

If you remain on this screen, some of the information displayed will be refreshed every minute. If you want the information updated sooner, click on the Refresh button.

<b>FONE-way Single Operations</b>	<i>A single</i> is a data collection operation you can perform on an individual STARFONE converter.	
	<i># Singles in Progress</i>	This integer field displays the number of operations, initiated by operators, currently being performed on individual STARFONE converters.
	<i># Singles Pending</i>	This integer field displays the number of operations, initiated by operators, that have not yet been performed because the converters have not yet been commanded to call into the system. When a modem frees up, a pending converter will be commanded to dial into the system.
	<i># Modems Failed</i>	The value in this field should be 0 (zero); it represents the number of FONE-way modems at the cable site that have failed. If it is not 0 (zero), make note of the modem errors that will have appeared in the logger window and then call 1-800-537-7653.
	<i>All Purchases Processed</i>	A single character field displaying a T or F. If all raw purchases collected from the converters have been written to the purchases data base, the value in this field is T. If the value is F, wait until it changes to T before you upload purchases.
<b>FONE-way Range Operations</b>	<i>Operation in Progress</i>	This character field displays the range operation currently being performed by the controller. Possible operations are:
		<ul style="list-style-type: none"> <li>• Operator-Initiated Recovery and Data Collection</li> <li>• Background Data Collection</li> <li>• Operator Initiated Data Collection</li> <li>• Background Non-Participating Poll</li> <li>• Operator Initiated Non-Participating Poll</li> </ul>
	<i>Status of Operation</i>	This character field displays the status of current range operations. The four status values are:
		<ul style="list-style-type: none"> <li>• None</li> <li>• Running</li> <li>• Ending</li> <li>• Canceling</li> </ul>

*Start of Group*

These two fields consists of:

- An integer field having the format MM/DD/YY, where MM is the month, DD is the day, and YY is the year (for example, 01/05/94)
- An integer field having the format HH:MM where HH is the hour with a range from 0 (zero) through 23, and MM is the minute with a range from 0 (zero) to 59

These are the starting date and time of the current range operation.

*# Converters Commanded*

This integer indicates the number of converters already commanded to dial for this range operation.

*# Errors*

This integer indicates the number of errors detected in the responses from FONE-way converters. When you see a non-zero value in this field, look in the logger window for any unusual or abnormally large number of errors. Call 1-800-537-7653 if you have questions.

*# Calls Received*

This integer indicates the number of calls that have been received from STARFONE converters.

*Current Converter ID*

A 1- to 6-digit integer in the range of 1 through 518144, excluding the numbers 256001 through 262144. This is the converter currently being commanded to dial.

*Total Purchases*

This integer indicates the total number of purchases collected during the current collection operation.

*Average Purchases per Converter*

This integer indicates the average, per converter, of the number of purchases collected during the current collection operation.

*Average Interleave Wait*

An integer. Interleave wait is the number of seconds that elapse between one subgroup being commanded to dial into the system and the next. Average interleave wait is the average number of seconds between transmissions of dial commands for successive subgroups.

*Average Subgroup Size*

An integer. A subgroup is a group of converters that are commanded to dial into the system at the same time. The average subgroup size is the average number of converters in a subgroup.

<b>Last Interleave Wait</b>	An integer. Last interleave wait is the number of seconds that elapsed before the last subgroup was commanded to dial in.
<b>Last Subgroup Size</b>	An integer indicating the number of converters in the last subgroup that was commanded to dial in.
<b>Two-Way RF Polling Operations in Progress</b>	<p><i>Operation</i></p> <p>This field displays the range operation currently being performed by the controller. Possible operations are:</p> <ul style="list-style-type: none"> <li>• Operator-Initiated Group Data Collection</li> <li>• Operator-Initiated Non-Responding Poll</li> <li>• Automatic Initiated Non-Responding</li> <li>• Operator-Initiated Recovery Data Collection</li> <li>• Single Data Collection</li> <li>• Fast Poll</li> <li>• Opinion Poll</li> <li>• Viewership Monitoring</li> </ul>
<i>Status</i>	A character field. Status refers to the operation in progress and may be inactive, polling, or verifying. Status is not always displayed.
<i>Verify</i>	An integer indicating the number of converters that were selected to be processed in the non-fast poll phase of the current operation.
<i>Progress</i>	An integer indicating the number of converters that have been processed so far.

Click on the Exit button when finished looking at the information shown on this screen.

You can view the results of data collection operations for a range of both two-way and FONE-way converters.

### Displaying Data Collection Range Results

From the Display Impulse Operations Menu, select the Display Data Collection Range Results option.

**TWO-WAY Information**

**PHONE-WAY Information**

**RESULTS FROM DATA COLLECTION**

Date: 08/01/94 Time: 14:14      Date: \_\_\_\_\_ Time: \_\_\_\_\_

# converters processed : 51      # converters processed : \_\_\_\_\_

# purchases collected : 1      # purchases collected : \_\_\_\_\_

# non-responding converters: 49      # errors: \_\_\_\_\_ Stat: \_\_\_\_\_

**RESULTS FROM RECOVERY DATA COLLECTION**

Date: \_\_\_\_\_ Time: \_\_\_\_\_      Date: \_\_\_\_\_ Time: \_\_\_\_\_

# converters processed : \_\_\_\_\_      # converters processed : \_\_\_\_\_

# purchases collected : \_\_\_\_\_      # purchases collected : \_\_\_\_\_

# non-responding converters: \_\_\_\_\_      # errors: \_\_\_\_\_ Stat: \_\_\_\_\_

**RESULTS FROM BACKGROUND DATA COLLECTION**

Start Date: \_\_\_\_\_ Time: \_\_\_\_\_      Start Date: \_\_\_\_\_ Time: \_\_\_\_\_

End Date : \_\_\_\_\_ Time: \_\_\_\_\_      End Date : \_\_\_\_\_ Time: \_\_\_\_\_

# converters processed : \_\_\_\_\_      # commanded/#received: \_\_\_\_\_ / \_\_\_\_\_

# purchases collected : \_\_\_\_\_      # successfully processed : \_\_\_\_\_

# non-responding converters: \_\_\_\_\_      # purchases collected : \_\_\_\_\_

Background Status : \_\_\_\_\_

Refresh | Exit |

F6:Clear Field    F7:Field Help    F8:Form Help

*Display Data Collection Range Results screen*

The left side of this screen displays information collected from two-way converters, and the right side displays information collected from FONE-way converters. If you have only one of these two types of converters, the other half of the screen (the one for the converters you do not have) will not be displayed.

The three sections of this screen display the results of the last data collection, recovery data collection, and background data collection.

*Data collection*

Operator-initiated collection of all uncollected purchases.

*Recovery data collection*

Operator-initiated collection of all purchase information from converters (both previously collected and uncollected).

*Background data collection* Collection of uncollected purchases performed automatically by the system on a scheduled basis. **This type of collection is implemented only for FONE-way converters.**

The information for these three types of data collection includes:

<i>Date</i>	An integer field having the format MM/DD/YY, where MM is the month, DD is the day, and YY is the year (for example, 01/05/94). This field displays the day the last data collection was performed.
<i>Time</i>	An integer field having the format HH:MM where HH is the hour with a range from 0 (zero) through 23, and MM is the minute with a range from 0 (zero) through 59. This field displays the time the last data collection was performed.
<i># Converters Processed</i>	This integer indicates the number of converters which have successfully communicated their purchase information to the controller.
<i># Purchases Collected</i>	This integer indicates the total number of purchases received.
<i># Non-Responding Converters</i>	This integer represents the number of two-way converters that failed to respond to a punch.
<i># Errors (FONE-way information)</i>	This integer indicates the number of errors encountered.
<i>Stat (FONE-way information)</i>	This alpha field describes the current FONE-way operation status. The status can be: <ul style="list-style-type: none"> <li>• None</li> <li>• Running</li> <li>• Canceling</li> <li>• Ending</li> <li>• Complete</li> <li>• Blank (no status)</li> </ul>
<i>Start and End Dates and Times</i>	When the last background data collection began and ended.
<i># Commanded / # Received (FONE-way information)</i>	An integer that shows the number of FONE-way converters that were issued commands compared to the number that have called in (responded).

*# Successfully processed (FONE-WAY information)*

Of the number of FONE-way converters that responded (# Received), this number indicates how many were processed to completion.

*Background status*

See Stat, above.

Click on the Refresh button to update the information on the screen, or click on the Exit button when you are done.

Response polling is a necessary step in determining the overall functionality of the two-way or FONE-way data stream. The controller initiates a poll which essentially asks converters to respond. The poll calculates the number of responding and non-responding converters, as well as the number of errors received.

From the Display Impulse Operations Menu, select the Display Response Polling Results option.

### Displaying Response Polling Results

The screenshot shows the ACC4000 software interface with the title bar "ACC4000" and a menu bar with "Help". The main window is titled "DISPPOLL | Display Last Range Polling" and shows "records found".

**RESULTS FROM TWO-WAY CONVERTER OPERATIONS**

Operator Initiated Response Poll	Automatic Response Poll
Date: 08/01/94 Time: 14:32	Date: 08/02/94 Time: 14:00
# converters polled : 5	# converters polled : 5
# non-responding : 4	# non-responding : 4
# verified non-responding: [ ]	# verified non-responding: 4

**RESULTS FROM PHONE-WAY CONVERTER OPERATIONS**

Non-Participating Poll	Background Non-Participating Poll
Date: [ ] Time: [ ]	Start Date: [ ] Time: [ ]
# converters commanded : [ ]	# converters commanded : [ ]
# participating : [ ]	# participating : [ ]
# non-participating : [ ]	# non-participating : [ ]
status : [ ]	status : [ ]

Buttons at the bottom: Refresh, Exit, F6:Clear Field, F7:Field Help, F8:Form Help.

*Display Last Range Polling screen*

The top section of this screen displays operator-initiated as well as automatic response polling results for two-way converters. The bottom section displays non-participating and background non-participating polls conducted on FONE-way converters.

**Two-Way Polling Results Fields***Operator Initiated Response Poll Date and Time*

These two fields display the date and time the last response poll was started by an operator.

*Automatic Response Poll Date and Time*

The values displayed in these two fields represent the date and time of the last automatic response poll. The starting times are set in the config.dat file.

*# Converters Polled*

The number of converters that were requested to respond to the poll.

*# Non-Responding*

The number of converters that did not respond to the fast poll.

*# Verified Non-Responding*

When a converter doesn't respond to a two-way punch during the verify phase, it is considered to be verified non-responding.

**FONE-Way Polling Results Fields***Non-Participating Poll Date and Time*

These two fields display the date and time the last non-participating poll was started by an operator.

*Background Non-Participating Poll Date and Time*

The values displayed in these two fields represent the starting and ending dates and times of the last background non-participating poll. The starting times are set in the fonconfig.dat file.

*# Converters Commanded*

The number of converters that the controller commanded to dial in.

*# Participating*

The number of converters that dialed in and made a successful connection to the cable system.

*# Non-Participating*

The number of converters that did not dial into the system even though they were commanded to do so.

*Status*

This field displays the status of the last FONE-way range poll. Possible values are:

- Group done
- Canceled
- Link down
- System err
- Time sched
- Completed
- Running

If you see "System err" in this field, look at the Logger window for error details.

To enable or disable two-way automatic response polling and FONE-way background non-participating polling, use the Modify Impulse Parameters screen (see page 14).

The Modem Status Monitoring selection is useful when you are having data collection problems that you suspect are related to modems. Performing this operation gives you information on group data collection errors, individual modem errors, and total errors that you can compare to past modem performance.

All of the information reported on this screen, except the group collection errors data, was collected since the last system reboot. Group collection errors are displayed only while a group collection is in progress.

From the Impulse Operations Menu, select the Modem Status Monitoring option.

## Monitoring Modem Status

MODEM NUMBER	MODEM STATUS	TOTAL ERRORS	GROUP COLLECTION ERRORS
1	ACTIVE	0	0

*Modem Status Information screen*

The Total Modem Errors field at the top of the screen displays the sum of the values displayed in the Total Errors fields.

For each modem on your system, the following information appears:

*Modem Number*      This two-digit integer can be from 1 through 16.

*Modem Status*      A character field that displays modem status.  
Values can be:

- Active: The modem is connected and able to receive calls.
- Inactive: No calls have been received on this line, while lines on either side of it are receiving calls as usual. Two possible problems could be that this modem is physically disconnected, or its phone line is re-routed, or you may have a non-rotary system.
- Noisy: The modem is receiving calls, but more than a specified percentage of them are becoming disconnected. This percentage, 30 for example, is set in the fonconfig.dat file.

*Total Errors*      An integer indicating the number of errors related to this modem.

*Group Collection Errors*      An integer indicating the number of errors occurring while a group data collection is in progress. When the collection is over, the fields are cleared.

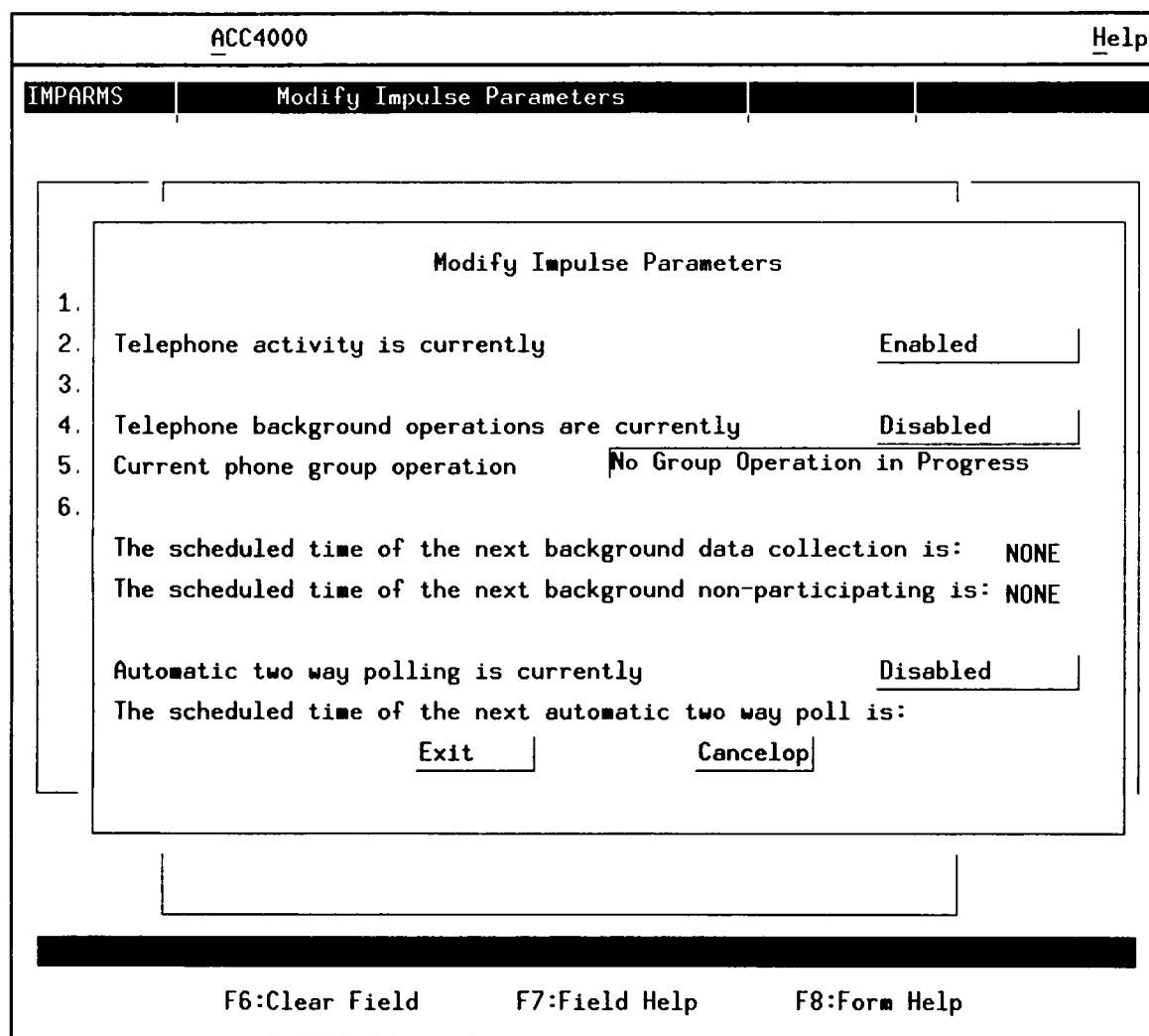
The information on this screen is refreshed approximately every minute. To see new information at any time, click on the Refresh button.

## **Viewing and Modifying Impulse Parameters**

Use this feature to modify how your entire FONE-way and two-way systems function. The Impulse Parameters selection lets you:

- Enable/disable telephone activity
- Enable/disable telephone background operations
- Identify the current group operation
- View the time scheduled for the next background operations
- Enable/disable automatic polling
- Cancel the current group operation

From the Impulse Operations Menu, select the Impulse Parameters option.



### Modify Impulse Parameters screen

To enable or disable a process, click on the appropriate button. You cannot disable phone activity, background operations, or automatic polling while an operation is in progress. If you attempt to do so, a message will appear reminding you to cancel the current operation before you attempt to disable a process.

To cancel a current group operation, click on the Cancelop button. It will take two minutes to allow STARFONE converters that are active in the current group operation to be processed. When you cancel, you are telling the controller not to initiate another round of group operations after the current group has been processed.

This screen also displays the scheduled times for background data collection, background non-participating polls, and automatic two-way polling. These values are not modifiable on this screen. For information about setting or changing these values, see *Volume III, System Administrator Reference Guide, Chapter 9, FONE*.

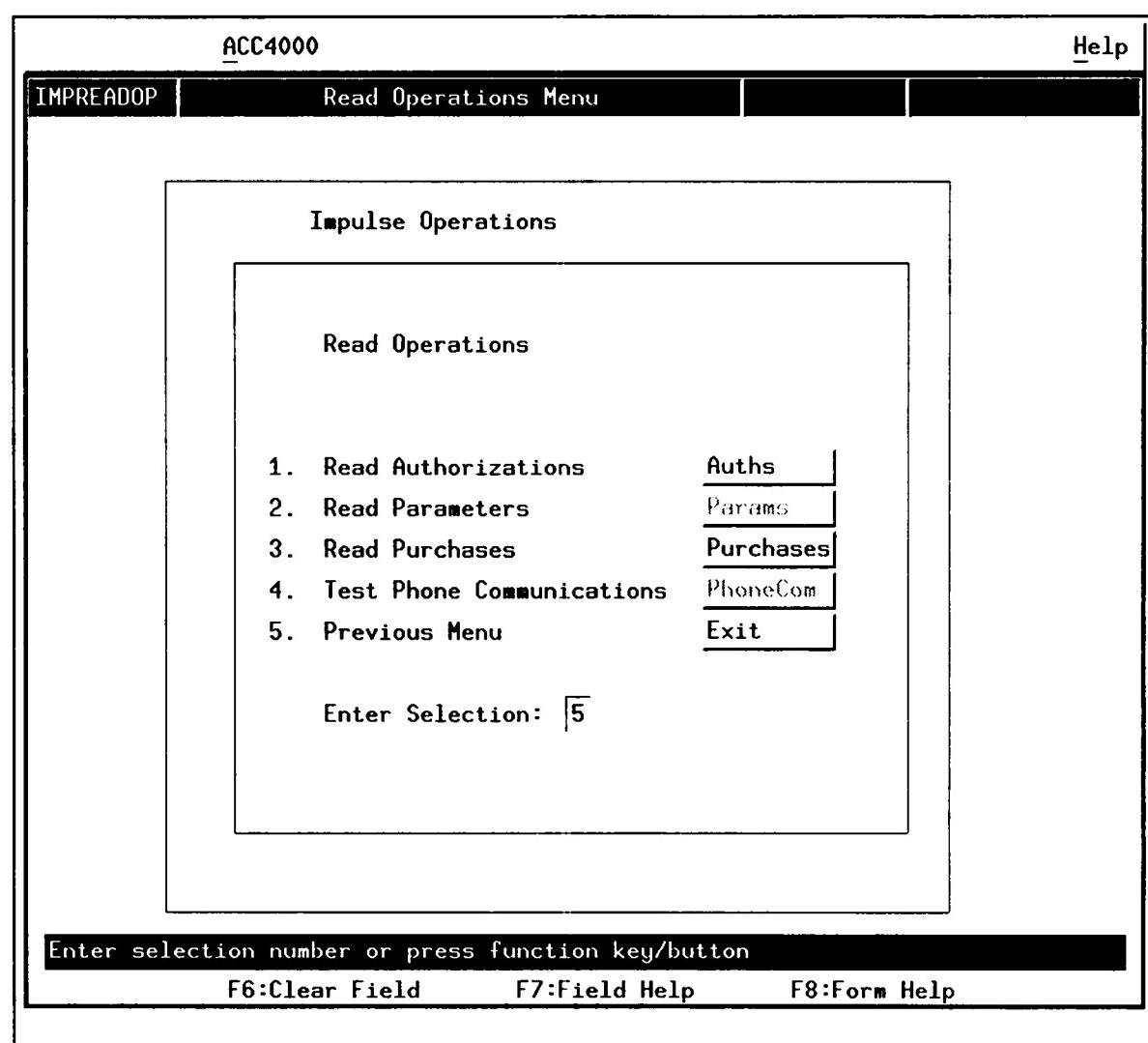
## Read Operations

When you select any of the options on the Read Operations Menu, you are telling the controller to read the values that are stored in an individual two-way or FONE-way converter. These values include:

- Authorizations that are stored in a two-way or FONE-way converter
- Parameters that are stored in a FONE-way converter
- Purchases that are stored in either FONE-way or two-way converters

From this menu you can also test phone communications using a specific modem (FONE-way converter only).

From the Impulse Operations Menu, select the Read Operations option.

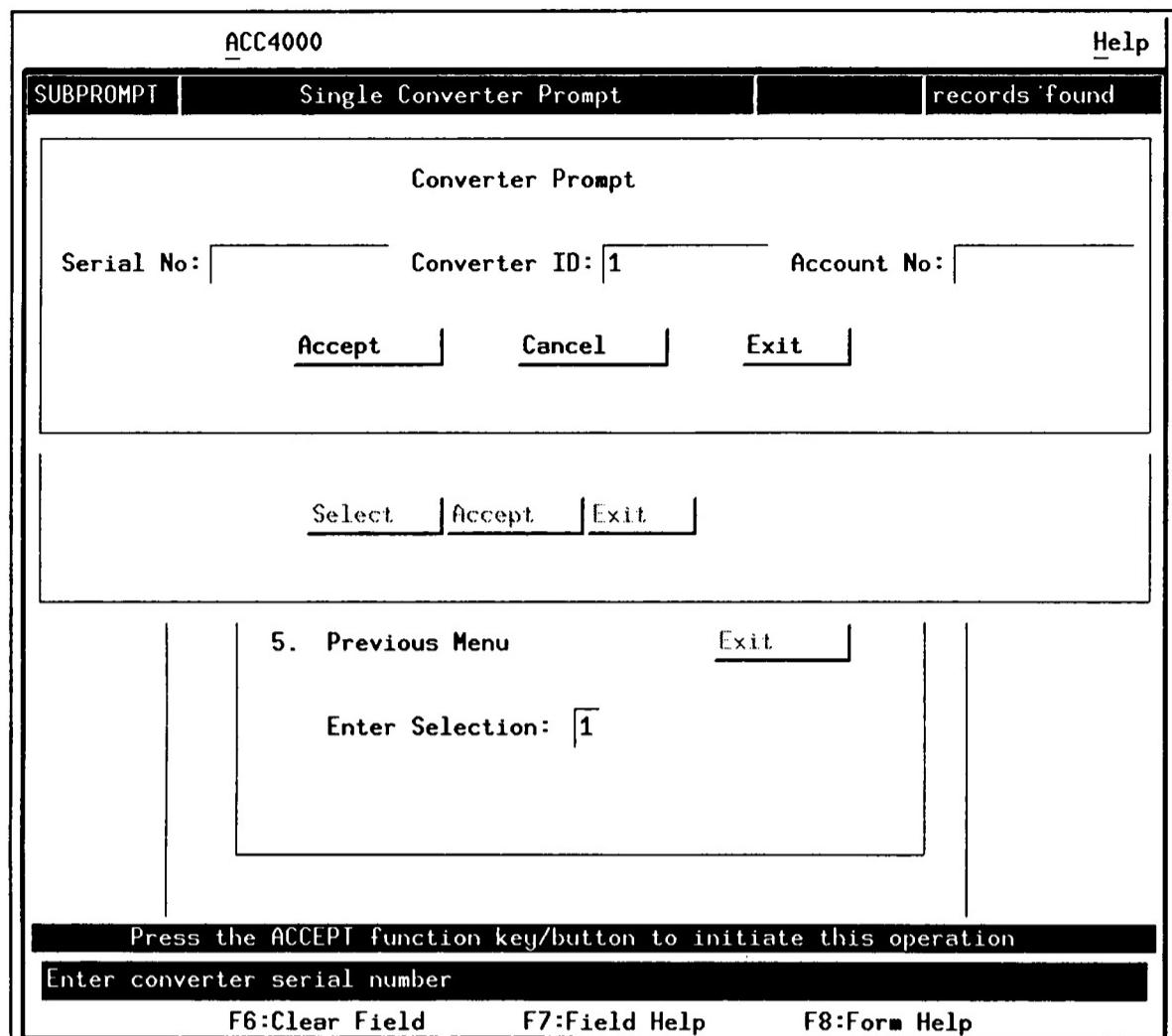


### *Read Operations Menu*

Options 2 and 4 are enabled only if you have FONE-way partitions on your system.

## Using the Single Converter Prompt Screen

Each option you choose from this menu first displays the Single Converter Prompt screen, unless you have previously chosen a single converter since the time you logged in.



*Single Converter Prompt screen*

Select a converter by typing its Serial Number, Converter ID, or Account Number, and then clicking on the Accept button.

If a read operation is not successful, you will see a message on the screen that tells you there was an error during setup. There are several reasons for this error:

- The converter may have dialed in successfully, but the phone line was too noisy. To eliminate this possibility, try communicating with this converter again.
- It is possible that the subscriber was on the phone line when you tried this communication. To eliminate this possibility, try again.
- The modem settings at your cable company may have been changed. Verify that they are correct, and then try again.
- The subscriber may have unplugged the phone line from the converter.

#### **Diagnosing an Unsuccessful Read Operation**

**Reading Authorizations**

From this option you can read the authorization values that a given two-way or FONE-way converter contains.

Select Read Authorizations from the Read Operations Menu, and select the converter you want to read. The Read Authorizations screen appears.

ACC4000

Help

IMPAUTHS | Read Converter Authorizations | records found

Read Converter Authorizations

Converter ID:  Serial No:  Account No:

Converter Type :  Level :  Timeout :   
 Available Credit:  Credit Limit  :  Service Code:   
 Emergency Alert:  -  -  -

Select | Accept | Exit

5. Previous Menu Exit

Enter Selection:

Press the ACCEPT function key/button to initiate this operation

F6:Clear Field    F7:Field Help    F8:Form Help

*Read Converter Authorizations screen*

Click on the Accept button. Information read from the converter appears on your screen:

*Converter Type*

The value in this field is an integer in the range of 1 through 35. Each number corresponds to a converter type for which the ACC-4000 provides a template. For detailed information about the characteristics of these converters, see *Volume III, System Administrator Reference Guide*.

<i>Level (RF return level)</i>	The two-way converter and the controller communicate regularly in order to find an optimal RF return level, a level high enough so that the converter can be heard, but not so high that an unacceptable noise level results. When a converter is initialized, it is set to the level found in this field. This value is a config.dat parameter in the range of from 1 through 15. Although the level will be changed through time, you will not see a current value unless you run the SETLEVEL Utility. Running this utility puts the current return level into the data base so that it can be displayed.
<i>Timeout</i>	The value in this field falls in the range of 2 through 384 hours (two weeks). For one-way converters, this value represents the number of hours before a converter will turn off if it doesn't receive its packet of data from the data stream. Every time the converter sees a good reset packet, it resets the timeout value to the default that is set in this screen. For two-way and for FONE-way converters, the timeout counter starts when the first purchase is made. In either case, the result of a converter timing out is that it goes to a disconnect status.
<i>Available Credit</i>	The value in this field indicates how much credit is still left on the converter. Credit can be represented in two ways: in number of purchases allowed or in dollars. Whether credit is recorded in number of purchases or in dollars is set in the config.dat file. If credit can be entered in dollars, a dollar sign (\$) appears after the word "Credit."
<i>Credit Limit</i>	The value in this field indicates the credit limit on the converter. Credit Limit can be represented in two ways: in number of purchases allowed or in dollars. Whether credit is recorded in number of purchases or in dollars is set in the config.dat file. If credit can be entered in dollars, a dollar sign (\$) appears after the word "Credit."

<i>Service Code</i>	The Service Code is a number from 1 through 256 that is associated with a subscription or event. A converter can tune to that subscription or event only if the Service Code is authorized for that converter. On this screen, the Service Code belongs to the channel currently being viewed.
<i>Service codes</i>	This area of the screen displays a list of all Service Codes authorized for this converter.
<i>Emergency Alert</i>	Emergency Alert applies only to type 5 (STARCOM 5 or XT5) converters. If these converters are a part of your system and you also need help with this option, call 1-800-537-7653.

**Reading Parameters from FONE-way Converters**

This option allows you to look at parameters relevant to a selected FONE-way converter. Use this option when installing a STARFONE converter in a subscriber's home; it allows you to verify that the converter data is correct.

Select Read Parameters from the Read Operations Menu, and select the converter you want to read. The Read Parameters screen appears.

Converter ID:	65551	Serial No.:	J6E4038608	Account No.:	5C
Signature:	0	Remote Unit:	Y	Retries:	0
Time Between retries:	0	Parental Control:	Y	Connect on timeout:	N
Phone #:	6723900	Vol Control:	Y	Timeout:	384
Credit Enabled:	Y	Credit Limit:	16	Available Credit:	16
Answer Timeout:	18	Non-sent entries:	0	Line Request:	N
Tuning Type:	S	Time Zone:	0	Service Code:	1
Timer Mode:	Y				

Buttons: Select, Accept, Exit

Bottom Row: F6:Clear Field, F7:Field Help, F8:Form Help

Read Parameters / Read Converter Parameters screen

When you then click on the Accept button, the controller reads information from the converter you chose. At the end of a successful read, the screen displays converter information in each of these fields:

<i>Signature</i>	The signature is a number derived from a computation performed on the converter ID and site code.
<i>Remote Unit</i>	A single alpha character field displaying a Y or N, indicating whether the converter is remote-capable.
<i>Retries</i>	This single-digit integer is set when a converter is initialized, and it should be 1. It indicates the number of times the converter should retry calling the controller.
<i>Time between Retries</i>	This value is also set when a converter is initialized. It should be set to 18.
<i>Parental Control</i>	A single alpha character field displaying an entry of Y or N, indicating whether the converter has the parental control feature.
<i>Connect on Timeout</i>	A single alpha character field displaying an entry of Y or N, indicating whether the converter will remain active at timeout.
<i>Phone #</i>	The phone number the converter dials when it phones the system.
<i>Volume Control</i>	A single alpha character field displaying an entry of Y or N, indicating whether the converter is capable of responding to a remote's volume control.
<i>Timeout</i>	The value in this field falls in the range of 2 through 384 hours (two weeks). The FONE-way timeout counter starts when the first purchase is made.
<i>Credit Enabled</i>	A single alpha character field displaying an entry of Y or N, indicating whether the converter is allowed credit.
<i>Credit Limit</i>	The value in this field indicates the credit limit on the converter. Credit Limit can be represented in two ways: in number of purchases allowed or in dollars. Whether credit is recorded in number of purchases or in dollars is set in the config.dat file. If credit can be entered in dollars, a dollar sign (\$) appears after the word "Credit."

<i>Available Credit</i>	The value in this field indicates how much credit is still left on the converter. Credit can be represented in two ways: in number of purchases allowed or in dollars. Whether credit is recorded in number of purchases or in dollars is set in the config.dat file. If credit can be entered in dollars, a dollar sign (\$) appears after the word "Credit."
<i>Answer Timeout</i>	This integer, representing seconds, indicates the amount of time the converter will wait for the system to communicate with it before hanging up. This value is read from fonconfig.dat, line [002].
<i>Non-Sent Entries</i>	This integer indicates the number of purchases made that have not yet been collected.
<i>Line Request</i>	The value, a fonconfig.dat file entry, line [003], is either T or F. If the value is T, the subscriber can interrupt the converter's modem while it is dialing in to the cable system.
<i>Tuning Type</i>	I = IRC, H = HRC, and S = STD, or standard tuning. H and S are the only valid tuning types, unless your converters are types 5 and 6. If, however, your system is IRC, and this converter type is not 5 or 6, you will see an S in this field.
<i>Time Zone</i>	The two-digit integer in this field represents the hours offset from system time. For example, if there are two sites to a system, and the non-system site is located one hour east of the system site, the non-system site displays a 1 in this field. Each time zone to the east is an offset value of 1.
<i>Service Code</i>	The Service Code is a 3-digit integer ranging from 1 through 256 that is associated with a subscription or event. A converter can tune to that subscription or event only if the Service Code is authorized for that converter. On this screen, the Service Code can display the following values:
	1      Either the converter is tuned to a non-scrambled channel or it is turned off.
	2-256    The converter is tuned to the channel associated with the displayed Service Code.

### *Timer Mode*

A single alpha character field requiring an entry of Y or N. When the Timer Mode is set to Y, the converter's timeout is reset only when the converter sees a good reset packet with its own address. When the Timer Mode is set to N, any good reset packet will reset its timeout.

You can read the purchase information stored in a converter without collecting, clearing, or in any way interfering with two-way or FONE-way data or operations.

## **Reading Purchases**

Select Read Purchases from the Read Operations Menu, and select the converter you want to read. The Read Single Converter Purchases screen appears.

Click on the Accept button. Information read from the converter appears on your screen.

### *Read Converter Purchases screen*

Entry

The range for this field is from 1 through 63.

*Service No.*

The number assigned to the subscription or event. If this number is "-1", the pay service information that belongs to this entry is no longer in the data base.

*Service Code*      The Service Code is a number from 1 through 256 that is associated with a subscription or event. The number in this field is the Service Code that was purchased.

*Date*      The date the purchase was bought.

*Time*      The time the purchase was made.

*Status*      The status is S for sent, blank for not sent. If the status field is blank, purchases have not been collected, and we suggest that you perform a single data collection on this converter.

### Testing Phone Communications

The ACC-4000 lets you test the telephone communications link between the controller and a STARFONE converter in order to determine if a modem and telephone line at the cable company site are functioning properly. This option also allows you to change the modem phone number at your site.

1. From the Read Operations Menu, select the Test Phone Communications option.

Converter ID:	65551	Serial No.:	J6E4038608	Account No.:	5C
Converter Type :	8	Initialized :	Y	Converter Status:	<input type="checkbox"/>
Credit Limit :	<input type="checkbox"/>	Partition Type :	P	Timeout :	384
Phone Index :	1	Phone Exchange :	1	Purchases :	<input checked="" type="checkbox"/>
Activate :	Y				
Telephone number of the modem to be tested: 5323908					
Number of times to execute the test converter sequence: 10					
Results of Converter Test:					
# Commands Sent:	10	# Responses:	10		
# Correct Responses:	10	# Incorrect Responses:	0		
<b>Select</b>		<b>Zoom</b>	<b>Accept</b>	<b>Exit</b>	

F6:Clear Field      F7:Field Help      F8:Form Help

*Test Phone Communications / Test Phone Communications/Converters screen*

2. If the converter you want to test is not displayed on the screen, click on the Select button and choose another converter.
3. You can change the phone number that the converter is going to dial. If you wish, enter a new phone number for the Telephone Number of the Modem to be Tested.
4. Once the converter you want to test is displayed on the Test Phone Communications/Converters screen, click on the Accept button.

The test sequence begins as soon as the telephone communications link has been established and includes these activities:

- The system requests information from the converter
- The converter responds to the request
- The system verifies the response
- The system updates the appropriate counters

The test sequence repeats a specified number of times, and the results are reported in four fields at the bottom of the screen. If any errors appear on the screen, check the modem settings and phone line.

This operation provides a series of choices for collecting all converter transactions, including previously collected purchases, for an individual converter or for a specified range of converters.

Make sure that the current operations mode on the Impulse Operations Menu is set to single. Select the Data Collection option.

The Single Converter Prompt screen appears. Enter the Serial Number, Converter ID, or Account Number for the converter you want, and then click on the Accept button.

The Single Converter Data Collection screen appears, displaying data for the converter that was last accessed. If you want to collect data for a different converter, simply click on the Select button, identify a different converter by Converter ID, Serial Number, or Account Number, and click on the Accept button.

## **Collecting Purchase Data**

### **Collecting Data from a Single Converter**

### **If No Converter Has Been Selected Since Login**

### **If a Converter Has Been Previously Selected**

The screenshot shows the ACC4000 software interface for 'Single Data Collection'. At the top, it says 'IMPSDATA | Single Data Collection' and has a 'Help' link. Below that is a title 'Single Converter Data Collection'. The main area contains several input fields and status indicators:

- Converter ID:** 32780    **Serial No.:** J7D4035696    **Account No.:** 1B
- Converter Type:** 11    **Partition:**     **Initialized:**
- Responding:**     **Purchases:**     **Activate:**
- Converter Status:**     **Credit Limit:**  16    **Hub Code:** 1
- Amplifier:**     **RF Return Level:** 15
- Master/Slave Set:** 1    **Master/Slave Stat:**

Below these are two status lines:

- Total Purchases:**
- Successful Communication:** YES

At the bottom are several action buttons: Select, Recovery, New, Clear, Accept, Cancel, and Exit. A message at the bottom center says 'Press an action key/button then the Accept key/button to proceed'. At the very bottom are function keys: F6:Clear Field, F7:Field Help, and F8:Form Help.

*Single Data Collection / Single Converter Data Collection screen*

From this screen, you can perform three different collection operations:

**Recovery**    Collects all purchase information from the converter, including purchases already collected.

**New**    Collects only uncollected purchases.

**Clear**    Permanently clears all collected purchase information in the selected converter.

#### **Performing a Recovery or New Operation**

1. Click on the Recovery or New button and then click on the Accept button.
2. After as much as four minutes for a STARFONE converter (when performing a recovery data collection), the total number of purchases appears in the Total Purchases field.

The Successful Communication field displays YES under two circumstances:

- Purchases were collected
- No purchases were collected, but communication between the controller and converter started and ended with no errors

**Before any purchase information is cleared from a converter, run purchase reports and make certain that purchase information is safely backed up or uploaded. Failure to take these precautions can result in permanent loss of this important billing information.**

### Performing a Clear Operation

1. Click on the Clear button and then click on the Accept button.  
A dialog box appears asking you to confirm clearing the collected purchases from the indicated converter.
2. Click on the Accept button if you want to clear the purchase data; otherwise, click on Cancel.  
A message will appear indicating if the purchases were successfully cleared.

Please see the important information about performing data collections that appears in *Volume III, System Administrator Reference Guide, Chapter 4, System Maintenance*. Following the guidelines will insure that you collect all your purchases in a timely way.

### Collecting Data from a Range of Converters

Make sure that the current operations mode on the Impulse Operations Menu is set to Range and then select the Data Collection option.

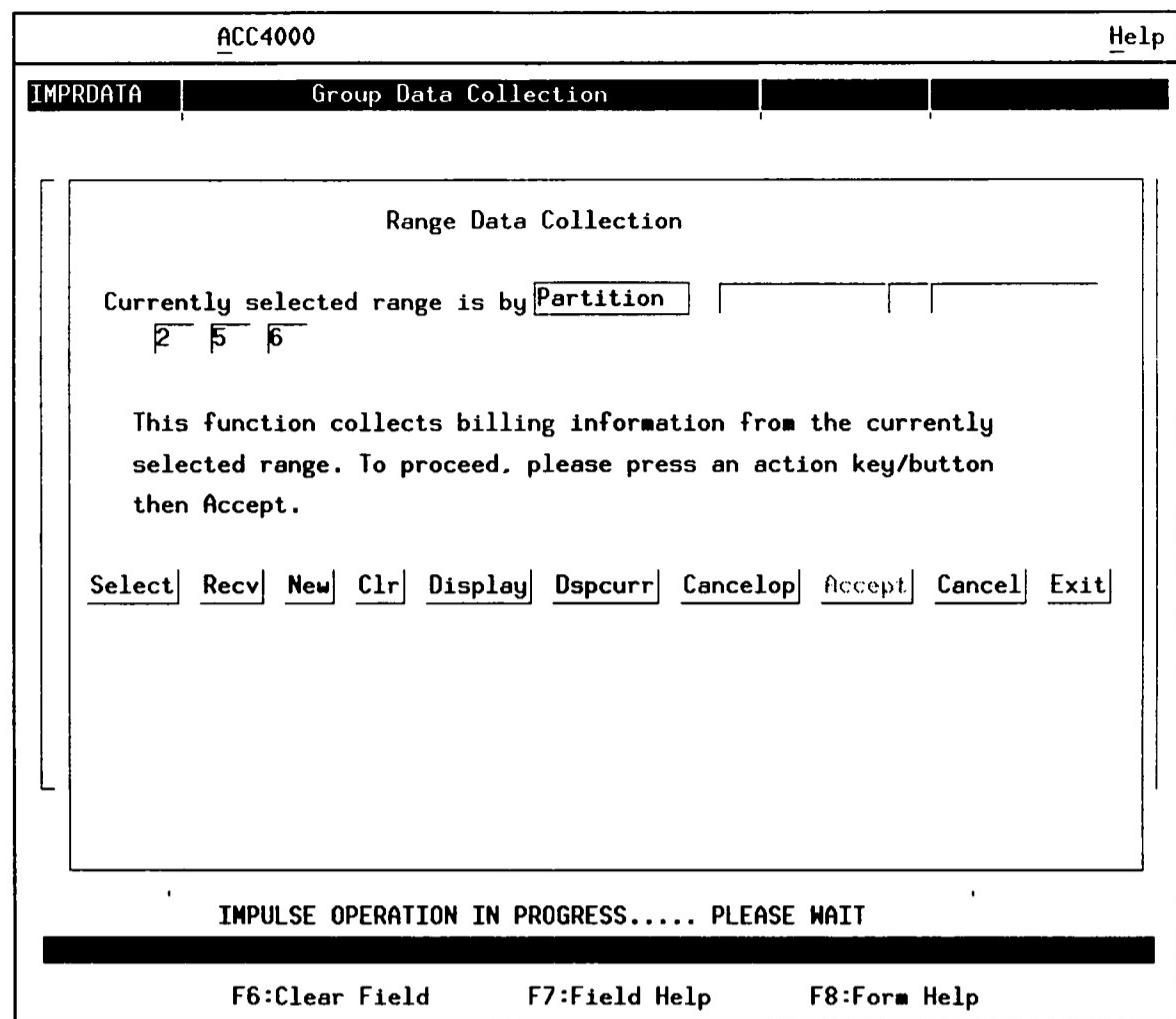
The Range Data Collection screen appears. To select a range of converters from which purchases will be collected:

### If No Converter Range Has Been Selected Since Login

1. Click on the Select button. The Select Converter Range screen appears.
2. Select a range and then click on Accept. The Group Data Collection screen reappears, displaying the range you selected.

The Range Data Collection screen appears. If you wish to select a different range, click on the Select button, choose a new range from the Select Converter Range screen, and then click on the Accept button.

### If a Converter Range Has Been Previously Selected



*Group Data Collection / Range Data Collection screen*

Now you can choose which type of data collection operation – recovery, new, or clear – to perform.

*Recovery*      Collects all purchase information from the range of converters you selected, including purchases already collected.

*New*      Collects only uncollected purchases from the range you specify. This operation lets you choose to run a fast poll before you start the actual data collection. The fast poll tells you how many converters you can expect to access during the collection, how many purchases would be collected, the total number of converters with purchases, and the total cumulative errors.

*Clear*      Permanently clears all collected purchase information in all converters in your system, regardless of which range you selected. **The clear operation is a global operation.**

#### Perform a Recovery Operation

**Arrange recovery operation can take a very long time to perform, because it takes approximately four minutes to collect data from each STARFONE converter. Consider the implications of such a time-consuming process before you decide to perform a recovery. If you begin a recovery, you may cancel the operation by clicking on the Cancel button.**

To begin the recovery operation from the Range Data Collection screen:

1. Click on the Recv button.
2. Click on the Accept button.

A message, "Impulse operation in progress...please wait," appears at the bottom of the screen. When a dialog box appears telling you that the operation is complete, click on the Continue button. The "Impulse operation in progress..." message remains on the screen. Click on the Cancel button to remove it.

3. You may now:
  - Look at the detailed results of the collection in the Logger window. Look at the summary results by clicking on the Display button
  - Exit from the Range Data Collection screen by clicking on Exit
  - Select a new range by clicking on the Select button.

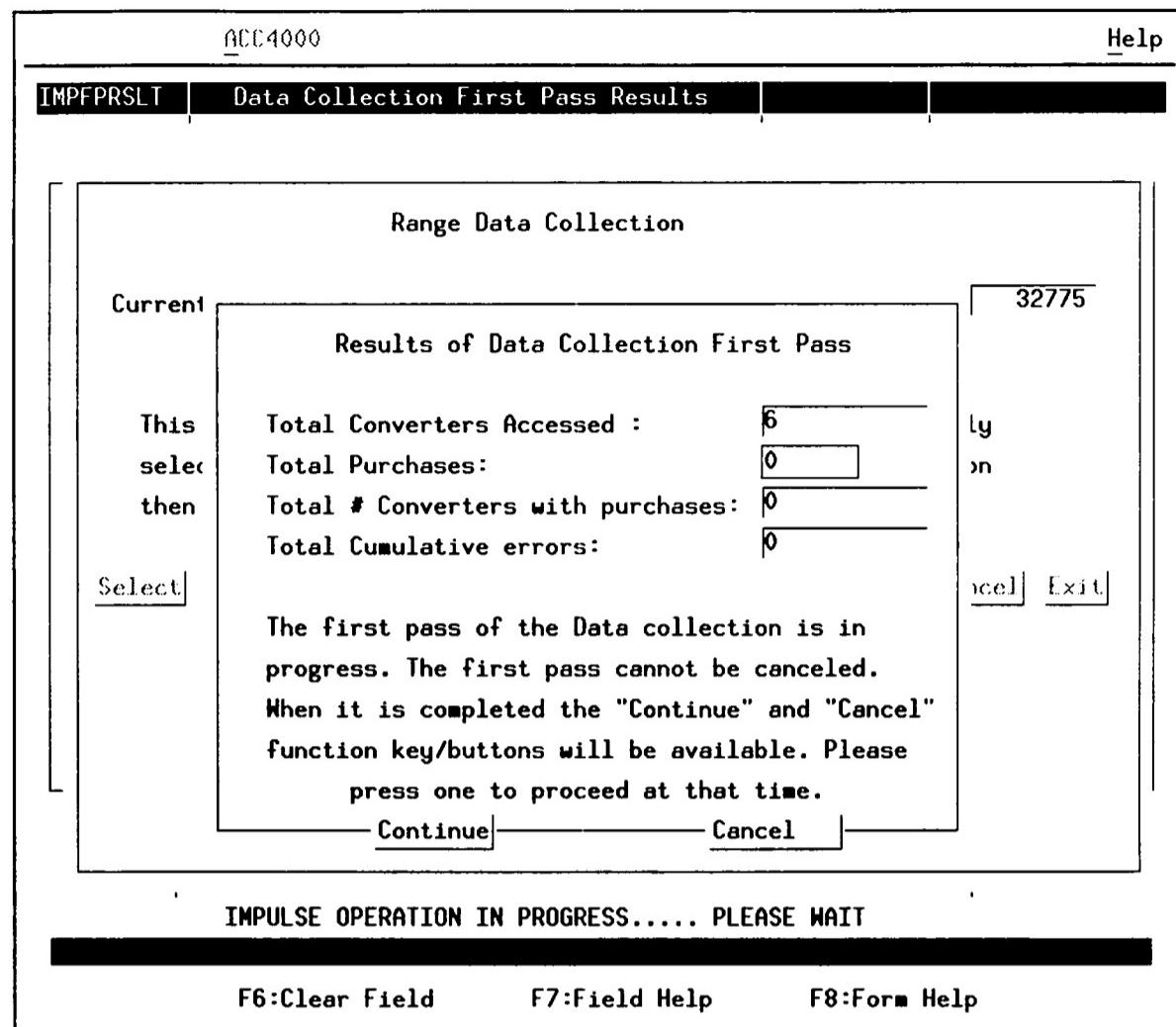
1. Click on the New button.
2. Click on the Accept button.

#### **Perform a New Purchase Collection**

For FONE-way systems, the data collection begins without a fast poll.

For two-way systems the message, "Initiate first pass of data collection?" appears in a dialog box. You have three choices, Yes, No, or Cancel:

- Yes: Click on this button to begin the fast poll part of the data collection. **During the fast poll, no purchases are collected.** When the fast poll completes, the Results of Data Collection First Pass screen appears.



*Data Collection First Pass Results / Results of Data Collection First Pass screen*

You can now choose to continue with the collection or to cancel. Just follow the instructions on this screen.

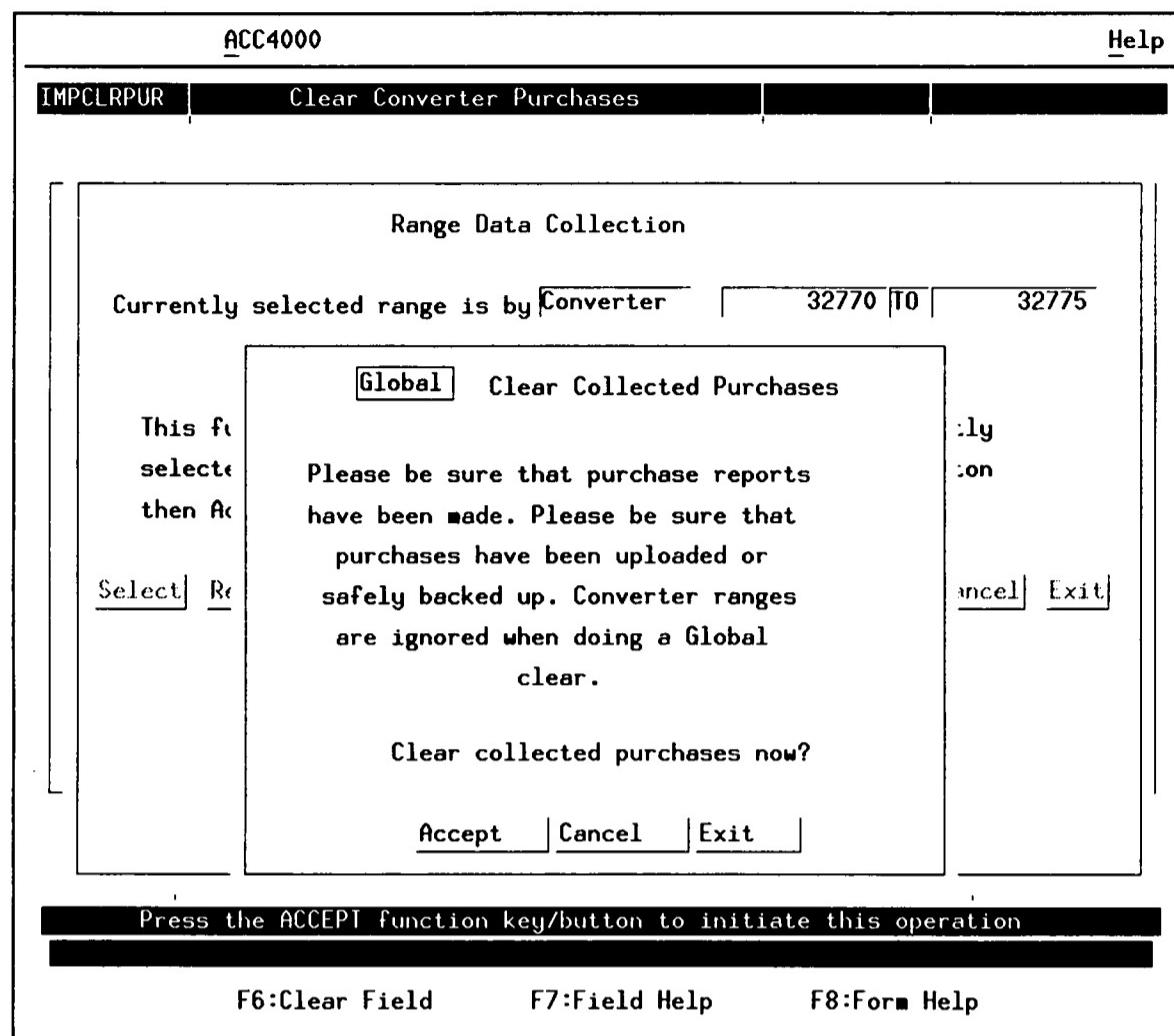
- No: Click on this button to bypass the fast poll and begin the actual data collection on every converter in the range. All converters in the range will be requested to send their new purchases.
- Cancel: Click on the Cancel button to return to the Range Data Collection screen without performing either the fast poll or the data collection.

If this data collection was not successful, call 1-800-537-7653.

#### Perform a Clear Operation

1. Click on the Clr button.
2. Click on the Accept button.

The Global Clear Collected Purchases screen appears.



### *Clear Converter Purchases / Global Clear Collected Purchases screen*

3. Click on the Accept button to clear all converters in your system, regardless of which range you selected, or click on Cancel or Exit to leave this screen without clearing converters of their purchases.

The detailed results and status of the data collection operation you selected are sent to the Logger window.

From the Range Data Collection screen, you can perform two additional operations:

*Display data collection range results*

You can display the results of the most recent data collection for the selected range. Click on the Display button.

If you want to display the results of a data collection you just initiated, wait until the operation is complete before clicking on this button. You will know the operation is over by looking at the Logger window.

*Display current operations*

Click on the Dspcurr button to display the current impulse operations status.

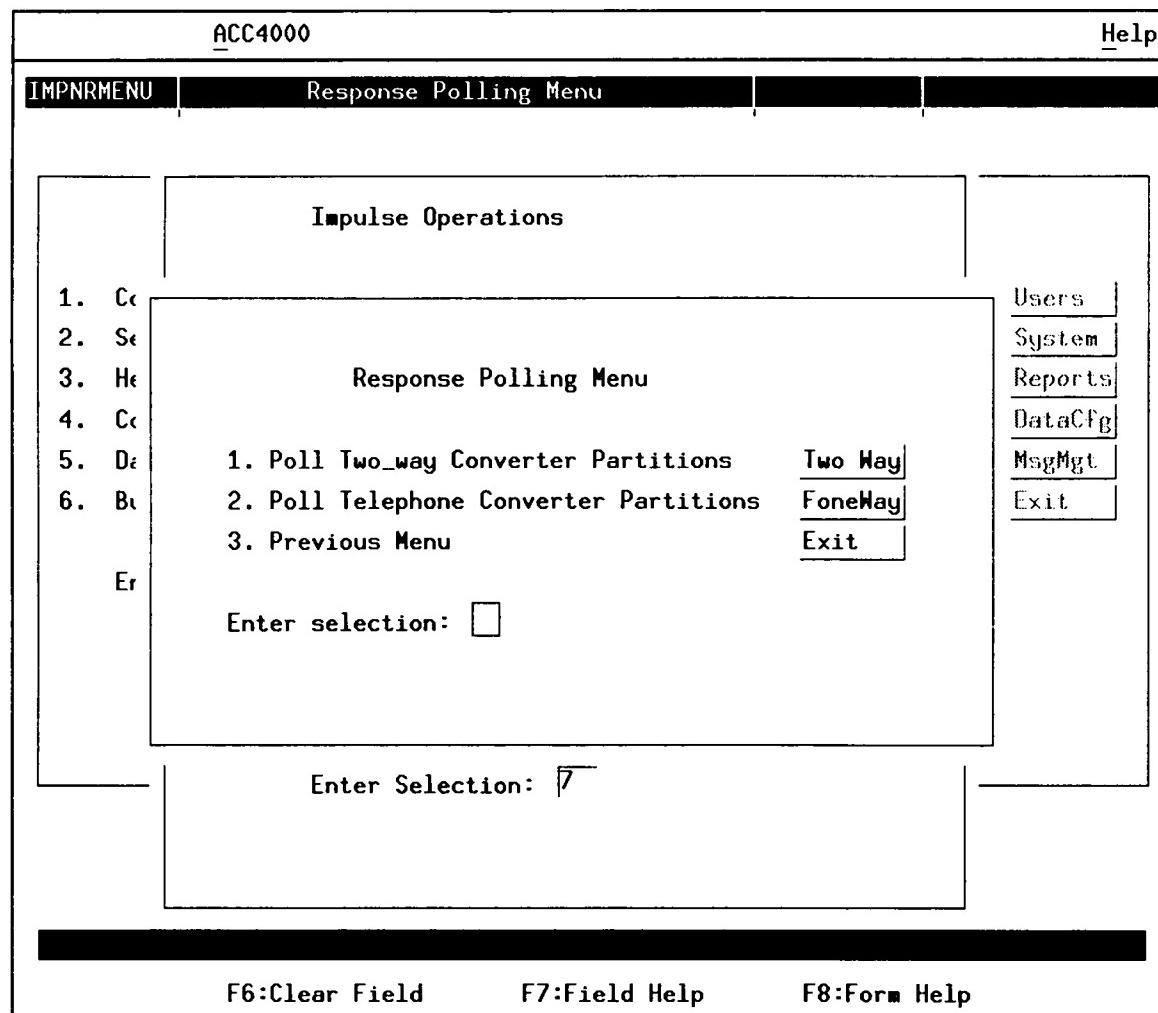
When the data collection operation is complete, you can print the results from the Reports Menu.

## Conducting a Response Poll

Response polling is a necessary step in determining the overall functionality of the data stream. During a response poll, the controller commands the specified converters to respond. The poll calculates the number of responding and non-responding converters, as well as the number of errors received.

You can initiate polls for two-way and FONE-way partitions.

From the Impulse Operations Menu, click on the Rsp Poll button to select the Response Polling Option. The Response Polling Menu appears.

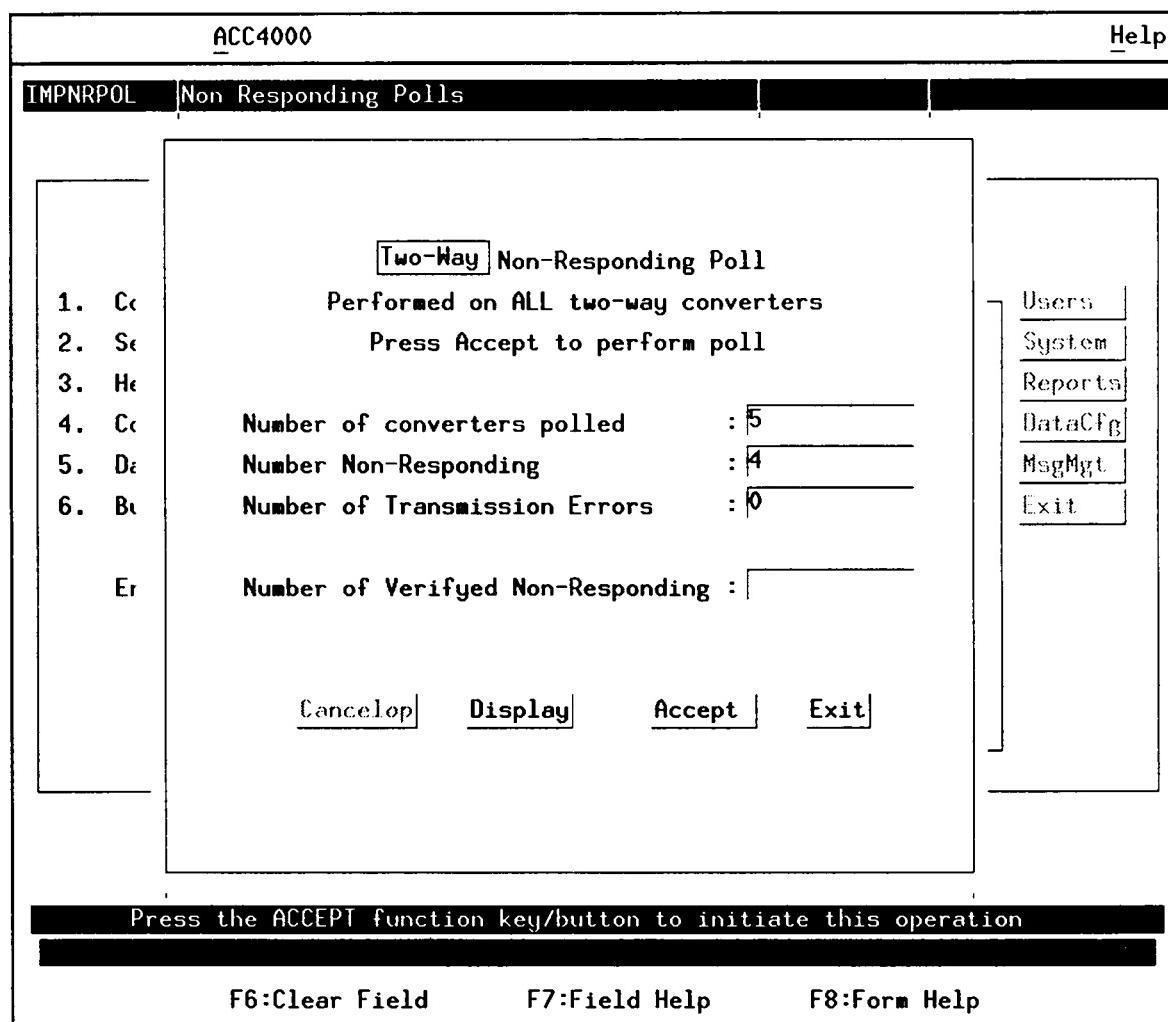


### *Response Polling Menu*

The non-responding poll feature lets you see how many two-way converters on your system are considered non-responding. This feature polls all two-way converters; you do not have the option to select by range or partition.

### **Polling All Two-Way Converters**

From the Response Polling Menu, select the Poll Two-Way Converter Partitions option.



*Non-Responding Polls screen*

When the Non-Responding Polls screen appears, click on the Accept button to begin the two-way non-responding fast poll. The fast poll makes one pass through the two-way converter population, requesting converters to return a response to the controller. The fast poll reports the number of converters that failed to respond. This operation should take no more than ten minutes to complete, depending upon the number of converters in your data base.

After the fast poll is completed, its results are displayed and a message appears asking if you want to verify the non-responding converters. If you click on the Yes button, the controller requests those non-responding converters to return a response. The number that fail to respond on this pass are considered to be verified non-responding converters. The verify operation runs in the background, but can be time-consuming if there are many non-responding converters. Meanwhile, however, you are free to leave this screen while the verify operation occurs in order to perform some other function.

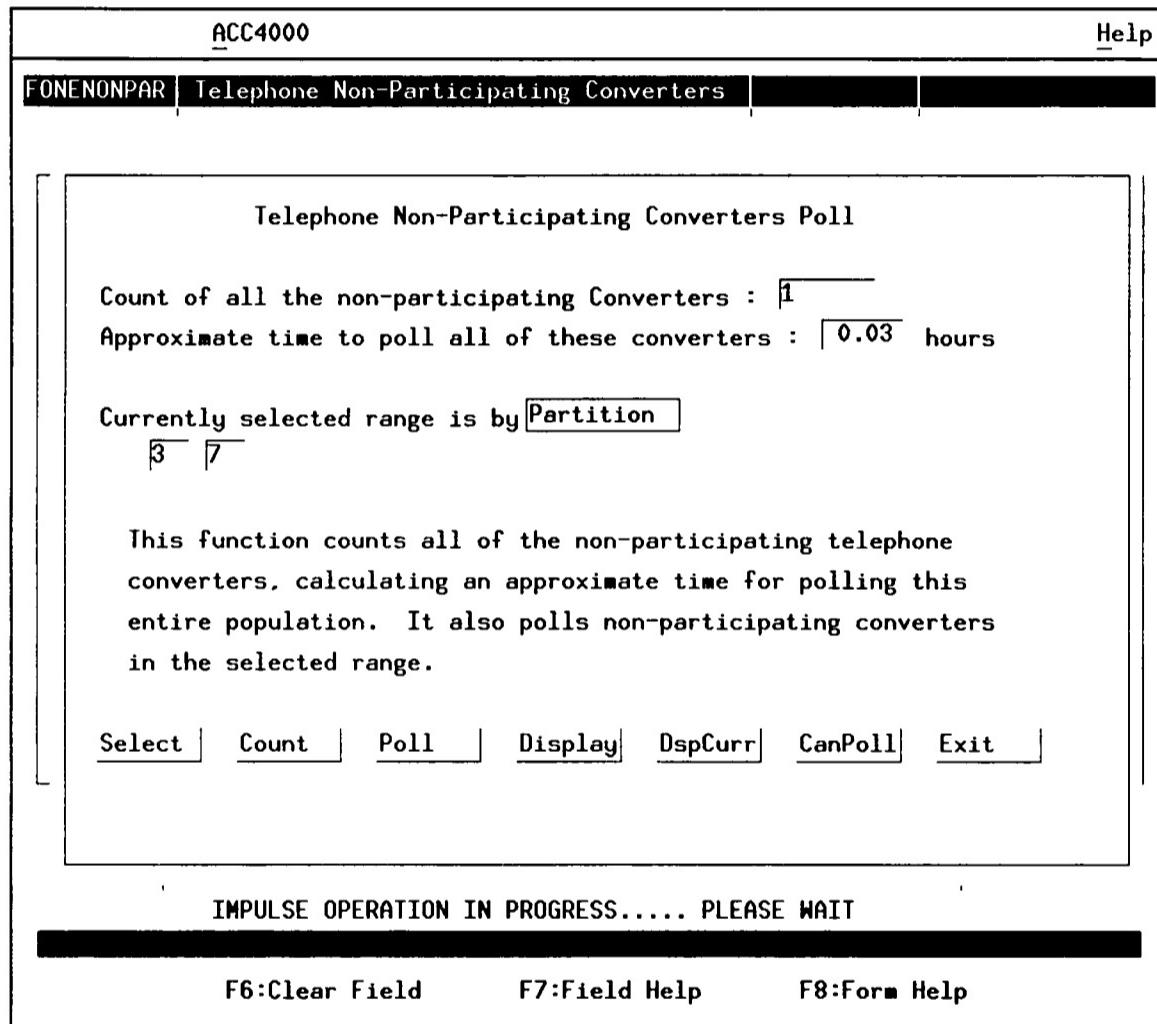
If at any point during the verify operation you wish to cancel, click on the Cancelop button.

Before clicking on the Display button to display the Display Last Range Polling screen (see page 11), check the Logger window to see the detailed results of the operation and that the operation is complete.

This feature lets you find out how many FONE-way converters on your system are non-participating, that is, converters which have not called in for any telephone operation since the non-participating file was last cleared.

1. From the Response Polling Menu, select the Poll Telephone Converter Partitions option.

### Polling FONE-way Converter Partitions



*Telephone Non-Participating Converters / Telephone Non-Participating Converters Poll screen*

2. Click on the Select button to choose a range, partition, or all FONE-way converters to poll.
3. Click on the Count button to count non-participating converters and get an estimate of how long it will take to poll them all.

The "Working" message appears at the bottom of the screen, and when it disappears, the count and approximate time are displayed at the top of the screen.

4. Click on the Poll button to initiate the polling operation.

The message "Impulse Operation in Progress... Please wait" appears. This operation can take some time, depending on the number of non-participating converters in your system. Also, while it is running, you may notice that your system runs more slowly. When the "...Operation in Progress..." message disappears the poll is complete, and you can view its detailed results in the Logger window.

Once the poll begins, you can cancel it at any time. If you choose to let it continue, you can leave the screen to perform other controller operations.

5. When the operation is complete, click on the Display button to see the results of the poll, which appear in the lower left hand corner of the Display Last Range Polling screen (see page 11 for an illustration of this screen).
6. Click on Exit to return to the Telephone Non-Participating Converters Poll screen.
7. From this screen you can also display the Display Current Operations screen by clicking on the DspCurr button (see page 5 for an illustration of this screen).

When the poll completes, you can print the non-participating converter results from the Reports Menu. However, before you print, you may want to re-count the number of non-participating converters in order to get an idea of how long it will take to print the report and how much paper you will need.

## **Viewership Monitoring/ Opinion Poll**

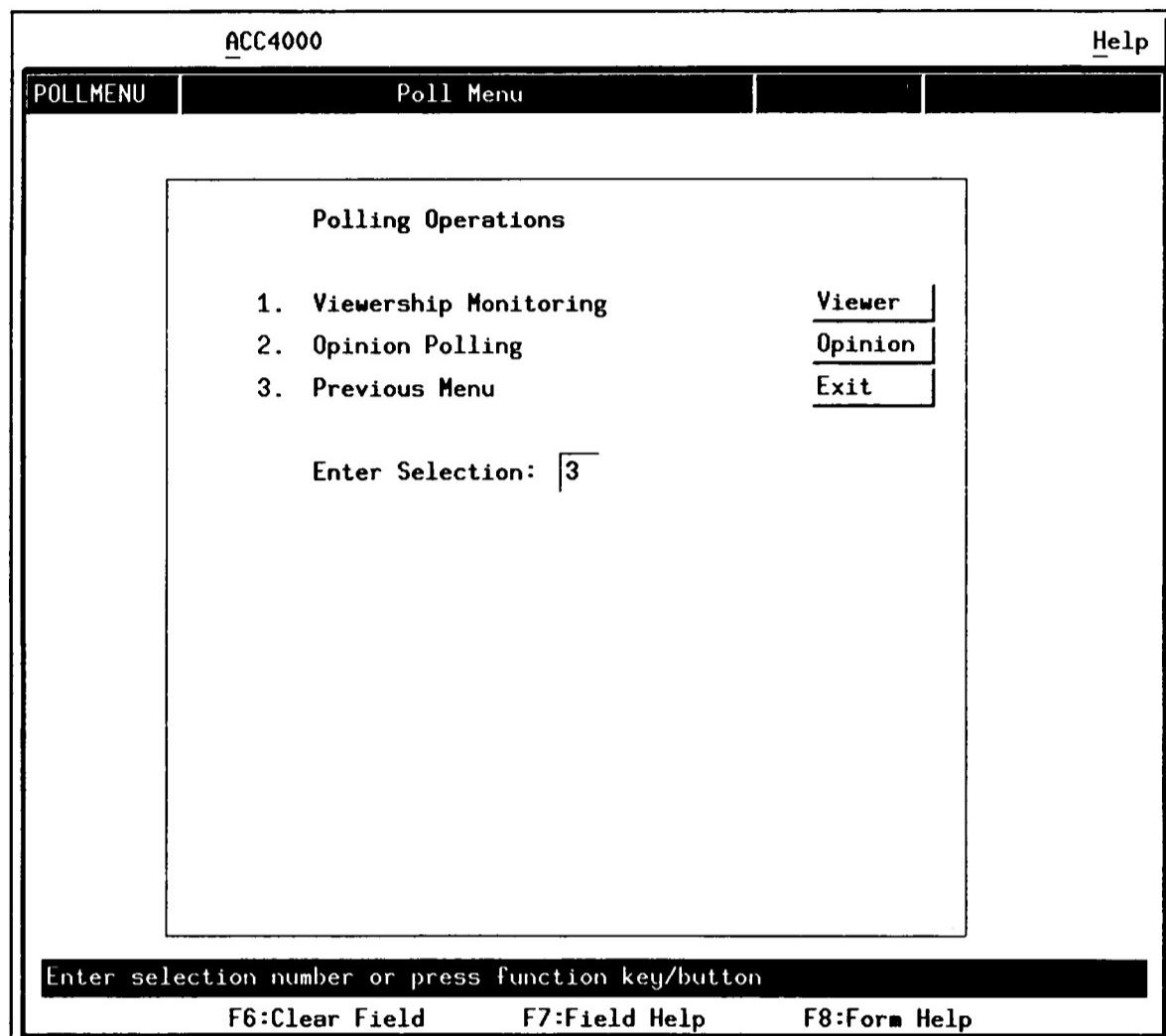
You can perform two different types of statistical reports about viewer activity on a two-way RF system:

*Viewership monitoring poll*      This poll finds converters that are tuned to the services that are currently in the pay service file, displays the total number of converters it finds, and then calculates the percentage of converters that are viewing (descrambling) each service.

To gather this data, every two-way converter in the system is polled.

*Opinion poll*      The Opinion Poll asks viewers to enter numeric responses to questions shown on the screen. The controller then polls all converters that respond, collecting this information for statistical reports. You can conduct this poll on any service of your choice.

1. From the Impulse Operations Menu, click on the Polls button to select the Viewership Monitoring/Opinion Poll option.



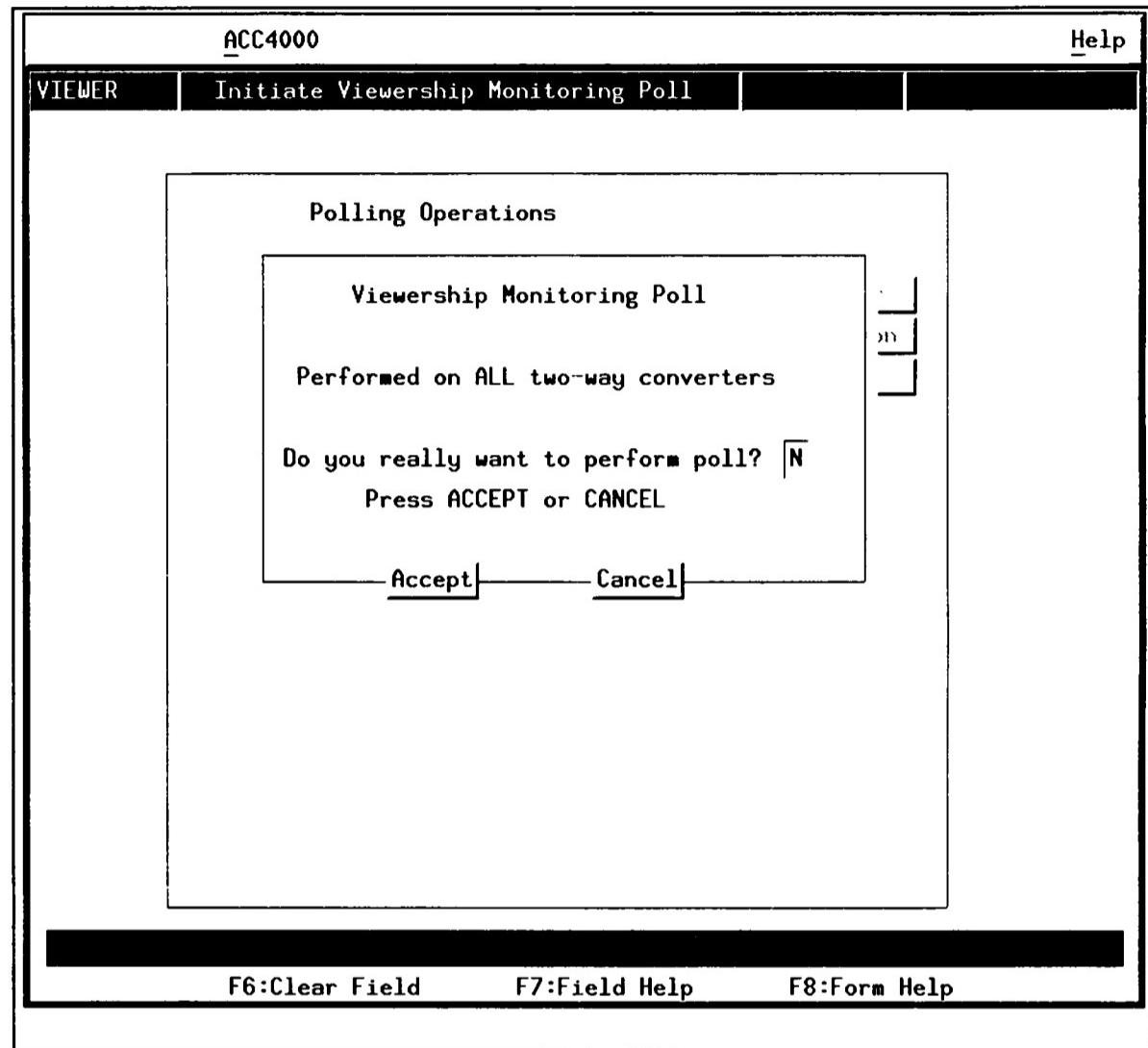
*Poll Menu / Polling Operations Menu*

2. Now select the Viewership Monitoring or Opinion Polling Option.

**Viewership Monitoring**

1. Click on the Viewer button to select the Viewership Monitoring option.

A screen appears asking if you really wish to perform a two-way monitoring poll on all two-way converters.



*Initiate Viewership Monitoring Poll / Viewership Monitoring Poll screen*

2. Click on the Accept button if you wish to perform this poll; click on the Cancel button if you don't.

The two-way poll is initiated as soon as you click on Accept. A "Working" message appears in the lower left corner of the screen.

The Viewership Monitoring Poll Results screen appears.

## ***Viewership Monitoring Poll Results screen***

<i>Number of Responses</i>	An integer indicating the count of all two-way converters on the system that respond to the poll.
<i>Number of Errors</i>	An integer representing the number of ANIC errors. The value in this field should be 0 (zero). However, use the past performance of your system as a guide. If 10 or 12 ANIC errors are usual, then a number substantially larger could signal a two-way problem.
<i>Service Number</i>	This is the number your company assigns to a pay service when it is entered into the controller.
<i>Description</i>	The name of the service.

*Service Code*      The Service Code is a number from 1 through 256 that is associated with a subscription or event. A converter can tune to that subscription or event only if the Service Code is authorized for that converter.

*Number of Viewers*      The number of converters tuned to this particular service.

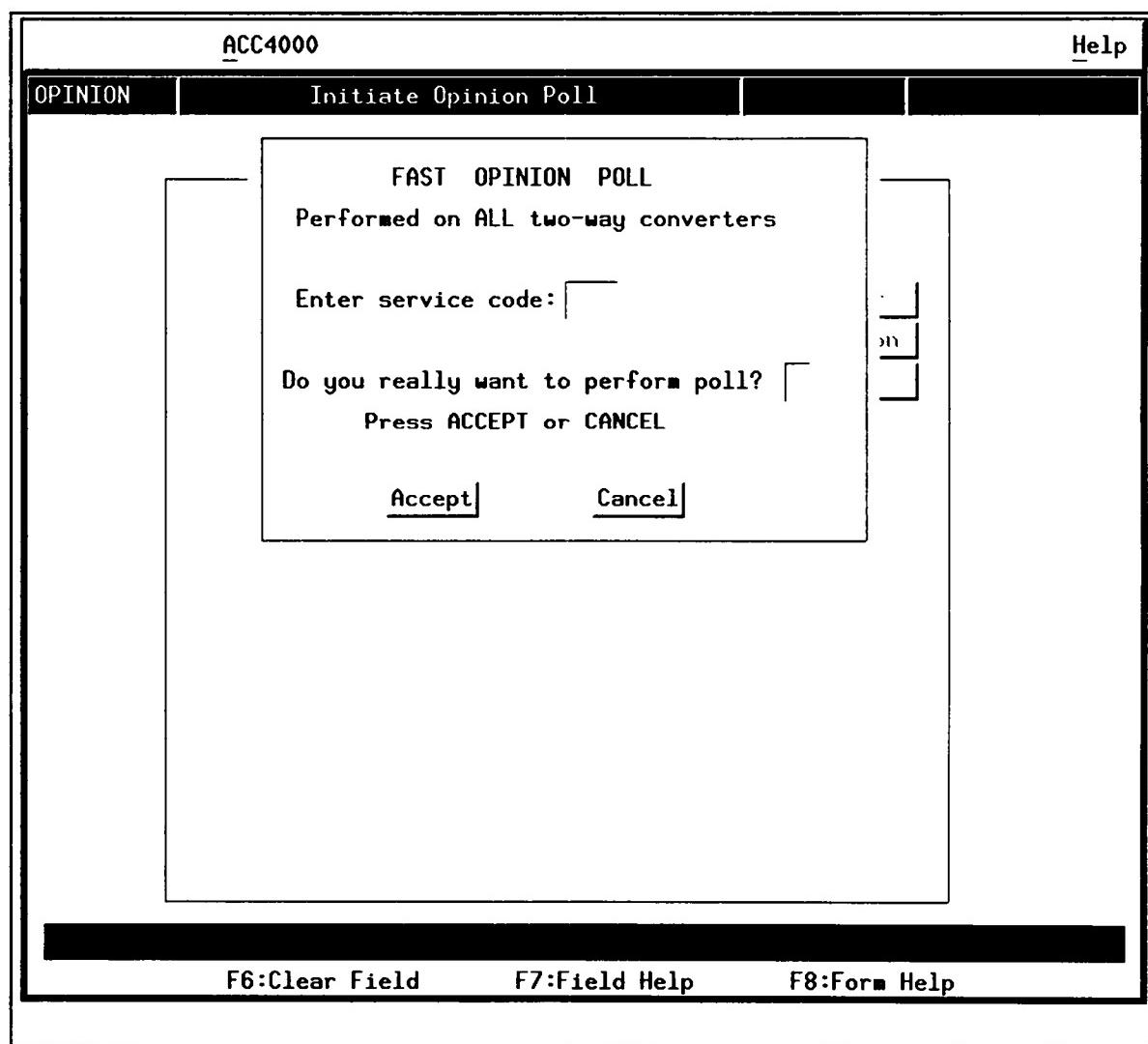
*Percentage Viewers*      The portion of converters, of all converters that respond, that are tuned to this particular service.

3. Click on the Exit button to return to the Viewership Monitoring Poll screen.

### Opinion Polling

In a two-way system, you can poll customers who are tuned to a specific service. The question you ask is phrased so that the viewer can respond by entering a number into the converter. For example, if you ask how much a household spends at the grocery store each week, the viewer's response is a number between 1 and 255.

1. Click on the Opinion button to select the Opinion Polling option.



*Initiate Opinion Poll / Fast Opinion Poll screen*

2. On the screen that appears, enter the Service Code of the service you want to poll.
3. Click on the Accept button if you wish to perform this poll; click on the Cancel button if you don't.

A fast poll is initiated as soon as you click on Accept and continues for as long as you see the "Working..." message. When the poll is complete, the results are displayed:

*Opinion Poll / Fast Opinion Poll screen*

The screen shows you the number of converters tuned to the Service Code you selected, and the number of errors generated, if any.

4. To continue with the opinion poll, type a Y in response to the question, "Do you want to turn on converter response light." Then click on the Accept button. The converters' response lights will go on, and customers can respond to your question.
5. When the screen confirms that the response light is on, click on the Accept button to begin collecting responses.

When all the responses are collected, the Opinion Polling Results screen appears.

Response Number	Number of Responses	Percentage
1	0.0	0.0
2	0.0	0.0
3	0.0	0.0
4	0.0	0.0
5	0.0	0.0
6	0.0	0.0
7	0.0	0.0
8	0.0	0.0
9	0.0	0.0
10	0.0	0.0
11	0.0	0.0

*Opinion Poll / Opinion Polling Results screen*

*Service Code*

This field displays the 3-digit integer ranging from 1 through 256 which is associated with a subscription or event. A converter can tune to that subscription or event. On this screen, the value in the Service Code field represents the service to which your polled customers are tuned.

*Number Responses*

This field displays the number of converters tuned to the selected Service Code.

*Percentage Indifferent*

This field displays the percent of converters tuned to the selected Service Code who did not respond to the poll.

*Number Indifferent*

This field displays the number of converters tuned to the selected Service Code who did not respond to the poll.

This feature is often used in conjunction with other trouble-shooting techniques when you find a converter whose RF return level is low. Check with your System Administrator before you perform this operation.

On systems equipped with two-way converters, you can adjust a converter's upstream frequency and command a converter to determine its optimal operating level.

To change a converter's level or frequency:

1. From the Impulse Operations Menu, click on the ChgLevel button to select the Change Converter Level option.
2. Select a converter by entering its Converter ID, Serial Number, or Account Number.

The Change RF Return Level screen appears. It displays the system level and frequency defaults and lets you enter new values.

Change RF Return Level		
Serial No: J7E4001987	Converter ID: 32779	Account No: 1A
System-wide default Level : 15 System-wide default frequency: 8.9		
New upstream level : 14 New upstream frequency : 8.3		
<input type="button" value="Select"/> <input type="button" value="Accept"/> <input type="button" value="Cancel"/> <input type="button" value="Exit"/>		
Enter Selection: 9		

*Change RF Return Level screen*

- To change level* Make sure the New Upstream Level field is highlighted, press F6 to clear the field, then enter a new value from 1 through 15.
- To change frequency* Highlight the New Upstream Frequency field, press F6 to clear the field, then enter a new value from 8.3 through 10.4.

## Change Converter Level and Frequency

## Isolate Babbling Converter

This routine is not supported on two-way systems that are equipped with Telephone Network Adapters (TNAs).

Before attempting to use this routine, disable automatic two-way polling and stop any wire link activity.

Occasionally, a converter malfunctions in such a way that it transmits constantly over the return data frequency. This continuous noise stream is called *babble*. A babbling converter can effectively jam return data such as purchase collection or viewership monitoring information. All two-way converters using the same return channel as the babbling converter can be affected.

Once you initiate this routine, you may abort by pressing Ctrl + C at any time **before** you enter a value for question number 4. Do not abort the process at any other time; if you do, some portion of the converter population may be left in a non-responding state.

To isolate a babbling converter so that you can remove it from the system, select the Isolate Babbling Converter option from the Impulse Operations Menu. A shell window will appear containing these questions:

### How Many Test Converters?

In order to identify which converters are babbling, you must first establish at least one non-babbling converter to be used as a constant in the isolation process. A larger number of test converters increases the reliability of the isolation process, but it also increases the amount of time required to find test converters and to conduct the search for babblers.

Enter a number greater than 1. The default is 6.

### What Percent Declare No Babbling?

When, during the testing process, a certain percentage of test converters continue to communicate successfully with the controller, it is likely that there is no babbling converter in the group being searched. If, on the other hand, successful communication stops taking place before that percentage of test converters is reached, a babbler is probably present in the group being searched.

Enter 60.

### What Delay Do You Want to Use?

A tic is 1/100 of a second. You want some amount of time to pass between the first punch that identifies the converter and the next punch that asks it to respond.

Enter 12, which is also the default.

### What Safety Margin Do You Want to Use?

The return level of the test converters must be higher than the return level of the babbling converters. Therefore, enter a value from 4 through 6 to increase the test converter return level by 4 to 6 dB.

Enter 4, which is also the default.

Once you enter a value for question number 4, the isolation routine begins. While the routine runs, observe the following guidelines for continuing with controller operations:

- Do not perform any two-way operations.
- Do not initialize any two-way converters.
- Do not attempt to abort the process by pressing Ctrl + C.

You can find the results of this routine in the Logger Window.

If any two-way converters are included in a one-way partition in your system, type Y in response to this question.

**Search on One-way Partitions?**

When the isolation routine terminates, the Impulse Operations Menu reappears. To look at the results of the isolation routine, look at the Logger Window.



## 6 • Services/Schedules

There are three types of pay services that you can establish for subscriber purchases:

*Subscription* A premium channel, such as HBO or Showtime, of infinite duration.

*Event* A program with a fixed duration such as a sporting event or a first-run movie, that is usually active only during a short period of time. Events are usually made available to subscribers on a Pay-For-View (PPV) or Impulse Pay-For-View (IPPV) basis.

*Package* A combination of events and subscriptions that can be purchased by subscribers and authorized as a single item. There are three types of packages, which we discuss later in this chapter.

From the Services/Schedules selection on the Main Menu, you can add, modify, and delete pay services.

You *must* perform Implement Pay Service Updates from the Services Menu before you can return to the Main Menu when you add, modify, or delete pay services.

First we discuss subscriptions and events, as the screens for working with either are the same. Once you create events, you can schedule them on a scrambler via a channel schedule, which we discuss later in this chapter. We will also discuss packages, and the screens for working with them.

To add a subscription or event:

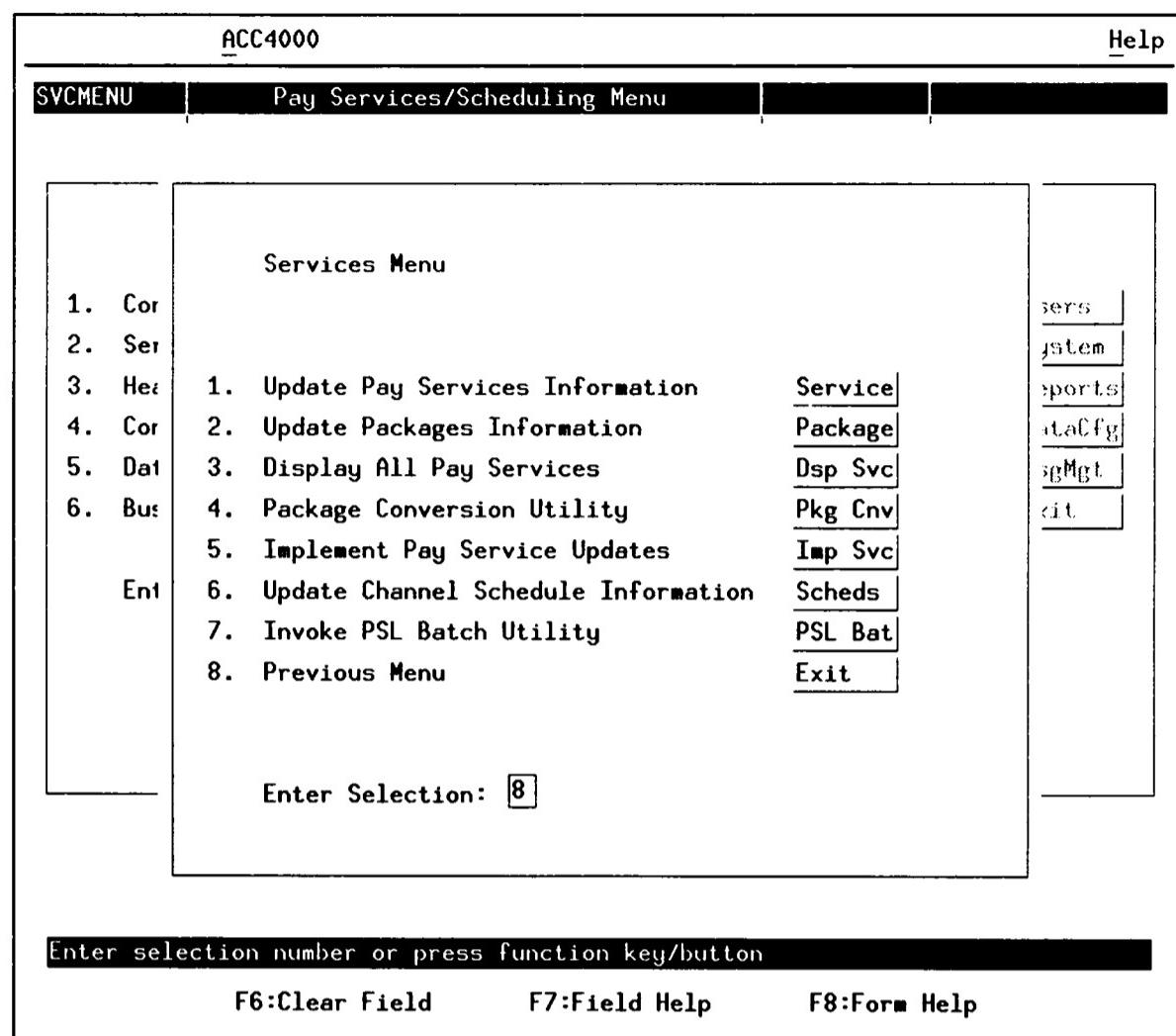
1. Click on the Svcs button to select the Services/Schedules option on the Main Menu. This displays the Services Menu.

### Introduction

### Keep This in Mind

### Subscriptions and Events

### Adding a Subscription or Event

*Pay Services/Scheduling Menu / Services Menu*

2. The Modify Pay Services screen appears when you click on the Service button.

ACC4000 Help

SERVICES	Pay Services	not stored
<b>MODIFY PAY SERVICES</b>		
Service Number : <input type="text"/> Service Type : <input type="checkbox"/> Subscription <input checked="" type="checkbox"/> Event		
Service Name : <input type="text"/> Price : <input type="text"/>		
Service Code : <input type="text"/> Channel Number : <input type="text"/> Sensitive : <input type="checkbox"/>		
Activation Date (MM/DD/YY) : <input type="text"/> Activation Time (HH:MM) : <input type="text"/>		
Duration : <input type="text"/> :		
<input type="button" value="Add"/> <input type="button" value="Select"/> <input type="button" value="Change"/> <input type="button" value="Delete"/> <input type="button" value="Zoom"> <input type="button" value="Exit"/> </input>		
<input type="button" value="Accept"/> <input type="button" value="Cancel"/>		
Press the Add or Select function key/button to proceed Enter service number or zoom for list of values.		
F6:Clear Field      F7:Field Help      F8:Form Help		

*Pay Services / Modify Pay Services screen*

This screen includes the following fields:

<b>Field</b>	<b>Description</b>
<i>Service Number</i>	A unique four-digit integer from 1 through 8191 identifying the service. When you are adding a pay service, the system provides the next available number in this field, which you can clear and change as long as your entry is unique.
<i>Service Type</i>	A single alpha character field identifying the Service Type. Valid entries are E for an event, or S for a subscription.
<i>Service Name</i>	A 30 alphanumeric character name identifying the service.

<b>Field (cont'd)</b>	<b>Description (cont'd)</b>
<i>Price</i>	An eight character amount field having the format DDDDD.CC, where DDDDD is the dollar amount, followed by a decimal point, and CC is for cents. The default is 0.00 and the maximum price that you can enter is 327.00. This indicates the price that you are charging for the service.
<i>Service Code</i>	A three-digit integer field having a range of values from 1 through 256, identifying a subscription or event. Also referred to as a tag. A Service Code can be used by only one event at a time.
<i>Channel Number</i>	An optional cable (A or B) precedes the up to three-digit integer channel. When you do not designate a cable, the default is A. The valid range for a channel is from 1 through 256. This identifies the channel on which the service is broadcast.
<i>Sensitive</i>	A single alpha character field requiring an entry of Y for yes or N for no. The default value is N.
<i>Activation Date</i>	Comprised of three two-digit integer fields having the format MM/DD/YY, where MM is the month, DD is the day, and YY is the year (for example, 01/05/94). For events only, this identifies the date when it becomes active, that is, available for channel scheduling.
<i>Activation Time</i>	Comprised of two two-digit integer fields having the format HH:MM, where HH is the hour with a range from 0 (zero) through 23, and MM is the minute with a range from 0 (zero) through 59. For events only, this indicates the time when it becomes active, that is, available for channel scheduling.
<i>Duration</i>	Comprised of two two-digit integer fields having the format HH:MM, where HH is the hour with a range from 0 (zero) through 99, and MM is the minute with a range from 0 (zero) through 59. For events only, this indicates the length of time that the event is active, commencing at the Activation Date and Activation Time. It also determines how long the Service Code is available for that event. The recommended value is 12 hours.

3. The system provides the next available Service Number when you click on the Add button from the Modify Packages screen.
4. If the Service Number provided is one that you wish to use, press the Enter key.

or

If the Service Number is not one that you want, press F6 to clear the field, type the number you wish to use, then press the Enter key.

5. Click on the Subscription or Event button to choose the Service Type.
6. Type entries into the fields for your subscription or event. Press the Enter or Tab key after each entry.
7. Click on the Accept button on completing the required fields to add the subscription or event to the database. After a few seconds, a blank Modify Pay Services screen appears.

To modify a subscription or event:

**Modifying a Subscription or Event**

1. From the Modify Pay Services screen, click on the Select button. This also enables the Zoom button.
2. Type the Service Number of the subscription or event that you want to change, then press the Enter key, or use the Zoom function to find the one that you want.
3. To change this record, click on the Change button. Or click on the Exit button to leave the screen.
4. Press the Enter or Tab key to move to, or click on, the first field that you want to change.
5. Press the F6 key to clear the field and type in your new entry.
6. Repeat steps 4 and 5 until done.
7. Click on the Accept button when you are finished making changes. This records your changes and returns you to a blank Modify Pay Services screen. You can display or modify information about another subscription or event, or you can click on the Exit button to return to the Services Menu.

### **Deleting a Subscription or Event**

To delete a subscription or event:

1. Click on the Select button from the Modify Pay Services screen.
2. Type in the Service Number of the subscription or event that you want to delete, then press the Enter key.
3. Click on the Delete button. A screen appears asking if you are sure you want to delete this pay service.
4. Click on the Yes button to make the deletion, or click on the No button. In either case, the system returns you to the Modify Pay Services screen where you can perform another pay services operation.

### **Package Types**

You can add, modify, and delete the following three package types:

<b>Package Type</b>	<b>Description</b>
<i>Standard Package</i>	Consists of subscriptions, events, or a combination of both.
<i>VIP Package</i>	Consists of all subscriptions and events within your designated range of service numbers.
<i>Channel Package</i>	Consists of all subscriptions and events that you schedule for a selected channel.

### **Adding a Package**

To add a package:

1. Click on the Package button from the Services Menu to select the Update Packages Information option. This displays the Modify Packages screen.

ACC4000

<b>PACKAGES</b>	Packages	not stored	<u>Help</u>
<b>MODIFY PACKAGES</b>			
Service Number : <input type="text"/>		Package Type : <input type="text"/> <u>P</u> ackage <u>V</u> IP <u>P</u> kg <u>C</u> hannel	
<u>Add</u>	<u>Select</u>	<u>Change</u>	<u>Delete</u>
<u>Zoom</u>		<u>Exit</u>	
<u>Accept</u>	<u>Cancel</u>		
Press the Add or Select function key/button to proceed			
Enter service number or zoom for list of values.			
<b>F6:Clear Field</b>		<b>F7:Field Help</b>	<b>F8:Form Help</b>

*Packages / Modify Packages screen*

This screen includes the following field not previously discussed in this chapter:

<b>Field</b>	<b>Description</b>
<i>Package Type</i>	A single alpha character field identifying the package type. Valid entries are P for a standard package, V for a VIP package, or C for a channel package.

2. The system provides the next available Service Number when you click on the Add button.

or

Press F6 to clear the Service Number and then type the one that you want to use.

3. Press the Enter key and type in the Package Type letter, or click on the Package Type button
4. The system displays a screen for the Package Type that you want to add. Skip to the screen example that applies to the Package Type that you are currently adding.

When you are adding a standard package, the screen looks like this:

Service Type	Sensitive Service	Description	Price
Number (S,E)	(Y,N)	Code	
212	E	N	VAMPIRE LESTAT 3.50
213	E	N	QUEEN OF THE DAMNED 3.50
215	E	N	TALE/BODY THIEF 3.50
10	E	N	INTERVIEW/VAMPIRE 3.95

For help on the function keys/buttons press the form help function key <F8>

F6:Clear Field      F7:Field Help      F8:Form Help

*Standard Packages / Modify Packages screen*

This screen includes the following fields not previously discussed in this chapter:

Field	Description
<i>Package Description</i>	A 30 alphanumeric character field for describing the standard package.
<i>Price</i>	A six character amount field having the format DDD.CC, where DDD is the dollar amount, followed by a decimal point, and CC is for cents. The default is .00 and the maximum price that you can enter is 649.00. This indicates the price that you are charging for this standard package.
<i>Description</i>	This is the Service Name, discussed earlier in this chapter.

When you are adding a VIP package, the screen looks like this:

**ACC4000** **Help**

VIP PKG | VIP Package | stored/modi records found

MODIFY PACKAGES

Service Number : 500 Package Type : V Package | VIP Pkg | Channel

VIP Package Name : VIP V-CHRONICLES Price : 14.95

Beginning Service Number : 31

Ending Service Number : 62

Change | Delete | Accept | Cancel | Exit | Zoom

Press a function key/button, followed by data entry, then Accept/Cancel  
Enter event description.

F6:Clear Field F7:Field Help F8:Form Help

*VIP Package / Modify Packages screen*

This screen includes the following fields not previously discussed in this chapter:

Field	Description
<i>VIP Package Name</i>	A 30 alphanumeric character field for describing the VIP package.
<i>Beginning Service Number</i>	A four-digit integer field having a valid range from 1 through 8191. This indicates the starting point for the range of services that you are including in the VIP package.
<i>Ending Service Number</i>	A four-digit integer field having a valid range from 1 through 8191. This indicates the ending point for the range of services that you are including in the VIP package.

When you are adding a channel package, the screen looks like this:

The screenshot displays the 'MODIFY PACKAGES' screen for the ACC4000 system. At the top, it shows 'CHN PKG' and 'Channel Package' in the title bar, along with 'stored/modi records found'. Below the title, there's a service number field containing '501' and a package type field with 'C' selected. The main area contains fields for 'Channel Package Name' (set to 'PKG-CH10DSE'), 'Price' (set to '5.00'), and 'Channel Number' (set to 'A10'). At the bottom of the screen, there are several function keys: 'Change', 'Delete', 'Accept', 'Cancel', 'Exit', and 'Zoom'. A message at the bottom left says 'Press a function key/button, followed by data entry, then Accept/Cancel' and 'Enter event description.' Function keys F6, F7, and F8 are also present at the bottom.

*Channel Package / Modify Packages screen*

This screen includes the following fields not previously discussed in this chapter:

Field	Description
<i>Channel Package Name</i>	A 30 alphanumeric character field for describing the channel package.
<i>Channel Number</i>	An optional cable (A or B) precedes the three-digit integer channel. When you do not designate a cable, the default is A. The valid range for a channel is from 1 through 256. This identifies the channel where any associated subscriptions and events comprise the channel package.

5. Type in the required information for the first field, then press the Enter or Tab key.
6. Repeat this process for subsequent fields until you complete them all.

7. After you are finished making entries, click on the Accept button to add your new package to the database. After a few seconds, the system returns you to a blank Modify Packages screen.

To modify a package:

#### **Modifying a Package**

1. From the Modify Packages screen, click on the Select button. This enables the Zoom button.
2. Type the Service Number for the package you want to display, then press the Enter key or use the Zoom button. The screen varies, depending upon the Package Type.
3. Click on the Exit button if you do not wish to make any changes and you want to return to the Services Menu.  
or  
Click on the Change button.
4. Press the Enter or Tab key to reach the first field that you want to change, or click on that field.
5. Press the F6 key to clear the existing information displayed in this field and type in the new entry or value.
6. Repeat steps 4 and 5 until done.

When adding services to an existing standard package, use the change function as just described. Type the Service Number or use the Zoom button to select one, then press the Enter key. The system automatically populates the remaining fields.

7. Click on the Accept button when you are finished. This stores your changes and returns you to a blank Modify Packages screen. You can now look at or modify information for another package or click on Exit to return to the Services Menu.

Before you can delete a package, you must first delete all of the components in it using the Packages screen on page 7.

#### **Deleting a Package**

To delete a package:

1. Click on the Select button from the Modify Packages screen.
2. Type the Service Number of the package that you want to delete, then press the Enter key.
3. Click on the Delete button. A screen appears asking if you are sure you want to delete this package.
4. Click on the Yes button to make the deletion, or click on the No button. In either case, the system returns you to the Modify Packages screen.

### **Deleting a Subscription or Event from a Standard Package**

To delete a subscription or event from a standard package:

1. Click on the Select button from the Modify Packages screen.
2. Type the Service Number of the standard package that you want to delete a subscription or event from, then press the Enter key.
3. Highlight the Service Number field of the component subscription or event that you want to delete from the package.
4. Click on the DelItem button. A screen appears asking if you are sure that you want to delete this component pay service.
5. Click on the Yes button to make the deletion, or click on the No button. In either case, you remain on the current screen where you can perform additional modifications on the selected package.
6. Click on the Accept button to complete the operation after making all deletions.

### **Package Conversion Utility**

To convert a service to the package type of your choice, you must add the service to the conversion list via the Package Conversion Utility. This utility also lets you remove a service from the conversion list or implement the service conversions. Because performing these operations can have a serious impact on your system, you should not perform them without the assistance of General Instrument technical support personnel.

### **Implementing Pay Service Updates**

After adding, deleting, or modifying events, subscriptions, or packages, you **must** implement them before you can exit the Services/Schedules area. To implement pay service updates:

1. From the Services Menu, click on the Imp Svc button to select the Implement Pay Services Update option. A screen appears requiring confirmation that you want to implement the pay service updates.
2. Click on the Accept button if you want to implement the update; or click on the Cancel button.

If you clicked the Accept button, the system returns you to the Services Menu and the message "Performing requested operation, please wait" appears in the lower left corner of the screen. After a few moments the message disappears, indicating that the update was successful. The pay services modifications are now complete. If the system is not able to implement the service updates, a message appears explaining the problem.

You can generate a report, organized by Service Number in ascending order, listing all pay services that you have implemented via the Implement Pay Service Updates option. To generate this report:

1. Click on the Dsp Svc button from the Services Menu to select the Display All Pay Services option. The Display All Pay Services screen appears.
2. Click on the Screen button to see the report on the screen; or click on the Printer button to send the report to the printer. When selecting printed output, you can specify the number of copies that you want generated.
3. Click on the Accept button to generate the report, or click on the Cancel button to return to the Services Menu.

## Displaying all Pay Services

The screenshot shows a computer terminal window titled "ACC4000" at the top left. At the top right, there is a "Help" link. Below the title bar, there are two buttons: "READPS" and "Display All Pay Services". To the right of these buttons, it says "records found".

The main area of the screen is titled "PAY SERVICE COMMON DISPLAY" and shows the date and time as "08/19/94 08:12". There is also an "Exit" button. Below this, there is a table header with columns: "Svc#", "Code", "Type", "Item", "Comp", "Chan", "Pur", "Active", "2Way", "Date", "Time", "Dur", and "Price". The "Description" column is also listed under the header.

The table lists six rows of data, each representing a pay service:

Svc#	Code	Type	Item	Comp	Chan	Pur	Active	2Way	Date	Time	Dur	Price	
1	193	E	1	0	A	10	Y	N	N	09/15/94	00:00	960	2.95
	HALLOWEEN 17												
2	194	E	1	0	A	10	Y	N	N	09/15/94	00:00	960	3.95
	JOY LUCK CLUB												
3	195	E	1	0	A	10	Y	N	N	09/15/94	00:00	960	3.95
	MISERY												
4	196	E	1	0	A	10	Y	N	N	09/15/94	00:00	960	3.95
	ROCKY 8												
5	197	E	1	0	A	10	Y	N	N	09/15/94	08:00	960	3.95
	PATRIOT GAMES												
6	198	E	1	0	A	10	Y	N	N	09/15/94	08:00	960	4.00
	FALSETTOS												

At the bottom of the screen, there are three function keys: "F6:Clear Field", "F7:Field Help", and "F8:Form Help".

*Display All Pay Services / Pay Service Common Display screen  
(Pay Service Common Report)*

The sample report on the previous page shows output to the screen. However, we recommend printing the report whenever possible, as the format is easier to read. This report includes some fields requiring further explanation:

<b>Field</b>	<b>Description</b>
<i>Item or Item Number</i>	The system assigns this number to the service when it is added to the database. You can ignore this number.
<i>Comp or Comp Svc#</i>	The Service Code of the event or subscription that is included in a package. The value is 0 (zero) when the service is not a component.
<i>Pur</i>	A single alpha character field having a value of Y or N, reflecting whether or not the Service Code is set up as purchasable.
<i>Active</i>	A single alpha character field having a value of Y or N, reflecting whether or not the Service Code is currently active.
<i>2Way</i>	A single alpha character field having a value of Y or N, reflecting whether or not the Service Code is set up as two-way.
<i>Time</i>	The activation time of an event.
<i>Dur</i>	The duration of an event shown in minutes.

4. If you chose to output the report to the screen, click on the Exit button when you finish looking at the report. The Services Menu reappears on the screen.

## Channel Schedules

A channel schedule lets you schedule an actual broadcast time for an event for a scrambler. Typically there is one channel schedule for each pay service, although you can schedule as many as fit into the pay service window for that Service Number. The channel schedules automatically generate the appropriate scrambler queue entries. As long as the scramblers are under automatic control, this information is sent to the scramblers without further intervention. You can choose to put the scramblers under manual control, but if you do, you must schedule the queues yourself. Channel scheduling allows you to avoid this extra work. For more information on queues, see *Chapter 7, Headend Equipment*.

Before assigning active events to a channel, you must first implement the associated pay service (see *Implementing Pay Service Updates* on page 12). To add a new channel schedule or to add additional events to an existing schedule:

1. Click on the Scheds button from the Services Menu to select the Update Channel Schedule Information option on the Services Menu. This displays the Channel Schedule Operations screen.

### Adding Events to a Channel Schedule

The screenshot shows the CHANSCHED Channel Schedule Operations screen. At the top, there are buttons for Add, Select, Change, Delete, Deldate, Delchan, Zoom, and Exit. Below that, a field shows 'Channel Number : A10' with 'Accept' and 'Cancel' buttons. The main area displays a table of scheduled events:

Svc Num	Date	Time	Duration	Clear Hr	Purch Min	Scramble Mode	Imp Purch	Video Inv	Morality Rating	Aud Inv
1	09/15/94	00:30	1 : 29	08	0 : 35	0 / 2	Y	C	X	Y
2	09/15/94	02:00	2 : 14	08	0 : 35	0 / 2	Y	C	X	Y
3	09/15/94	04:30	1 : 55	08	0 : 35	0 / 2	Y	C	X	Y
4	09/15/94	06:30	1 : 49	08	0 : 35	0 / 2	Y	C	X	Y
5	09/15/94	08:30	1 : 59	08	0 : 35	0 / 2	Y	C	X	Y
6	09/15/94	10:30	2 : 57	08	0 : 35	0 / 2	Y	C	X	Y
7	09/15/94	13:30	1 : 28	08	0 : 35	0 / 2	Y	C	X	Y
8	09/15/94	15:00	3 : 59	08	0 : 35	0 / 2	Y	C	X	Y

At the bottom, instructions say: "For help on the function keys/buttons press the form help function key <F8>" and "Enter the number of the service to be scheduled." Function keys F6, F7, and F8 are also listed.

*Channel Schedule Operations screen*

This screen includes the following field not previously discussed in this chapter:

Field	Description
<i>Date</i>	Comprised of three two-digit integer fields having the format MM/DD/YY, where MM is the month, DD is the day, and YY is the year (for example, 01/05/94). This identifies the start date for the event in the scrambler's associated queue.

<b>Field (cont'd)</b>	<b>Description (cont'd)</b>
<i>Time</i>	Comprised of two two-digit integer fields having the format HH:MM, where HH is the hour with a range from 0 (zero) through 23, and MM is the minute with a range from 0 (zero) through 59. This indicates the start time for the event in the scrambler's associated queue.
<i>Duration</i>	Comprised of two two-digit integer fields having the format HH:MM, where HH is the hour with a range from 0 (zero) through 99, and MM is the minute with a range from 0 (zero) through 59. The default value is 0:00. This indicates the length of the event.
<i>Clear Time</i>	A two-digit integer field having a range from 0 (zero) through 59 indicating the number of minutes for the preview period.
<i>Purch</i>	Comprised of two two-digit integer fields having the format HH:MM, where HH is the hour with a range from 0 (zero) through 99, and MM is the minute with a range from 0 (zero) through 59. The default value is 0:00. This indicates the length of the purchasability period.
<i>Scramble Mode</i>	Comprised of two single-digit integer fields, separated by a slash. The first field has a range from 0 (zero) through 7, indicating the MVP emulation mode. The second field has a range from 1 through 9, indicating the sync suppression mode. For more information on these fields, see <i>Chapter 7, Headend Equipment</i> .
<i>Imp Purch</i>	A single alpha character field requiring an entry of Y for yes or N for no. A Y indicates that the event is impulse purchasable by subscribers.
<i>Video Inv</i>	A single alpha character field requiring an entry of A through F or – (hyphen) to represent the type of video inversion. For more information on this field, see <i>Chapter 7, Headend Equipment</i> .

<b>Field (cont'd)</b>	<b>Description (cont'd)</b>
<i>Morality Rating</i>	An optional single alpha character field. The values that you can enter are G, P, X, or R, reflecting the Motion Picture Industry Association rating for the event. This field applied only to XT5 (STARCOM V) converters.
<i>Aud Inv</i>	A single alpha character field requiring an entry of Y for yes or N for no. A Y indicates that the event is to be scrambled via audio inversion. For more information on this field, see <i>Chapter 7, Headend Equipment</i> .

2. Click on the Add button.
3. Type in optional cable (A or B) and the channel number, for example A43, then click on the Accept button.  
The screen displays any events currently scheduled on this channel. The cursor gets positioned on the Service Number field of the first vacant line. Enter the information for each event that you want to schedule on the channel.
4. Press the Enter or Tab key to move through the fields.
5. Press the Down Arrow on the keyboard to move the cursor down to the next line on the schedule. The fields use the values from the previous entry as defaults.
6. Repeat steps 4 and 5 for each event that you want to add.
7. Click on the Accept button after adding all events. Or you can use the Cancel button to cancel the entire add transaction. If you chose to click on the Accept button, a blank Schedule screen appears. You can perform another operation on the channel schedule or click on the Exit button to return to the Services Menu.

To delete events from a channel schedule:

1. Click on the Select button from the Channel Schedule Operations screen.
2. Type an optional cable (A or B) and Channel Number, for example A38, then click on the Accept button.
3. Use the Scroll Bar or the Up and Down arrow keys to move to the event that you want to delete.
4. Click on the Delete button to indicate which channel schedule row is to be deleted. A screen appears which asks for operator confirmation for the deletion.

#### **Deleting Events from a Channel Schedule**

5. Click on the Yes button to delete the event, or click on the No button. If you choose Yes, the Pay Service is deleted. Information about the remaining services reappears at the bottom of the Schedule screen.
6. You can repeat steps 3 through 5 to delete other events.
7. Click on the Accept button when you finish making deletions. Then click on the Exit button to return to the Services Menu.

**Deleting Events By Date from a Channel Schedule**

To delete all events from a channel schedule within a given date range:

1. Click on the Select button from the Channel Schedule Operations screen.
2. Type an optional cable (A or B) and the channel number, for instance A38, then click on the Accept button.
3. Click on the DelDate button to access the Delete by Date Range screen. All events on and between the starting and ending dates will be deleted.
4. Type in the starting date in the range, and press the Enter key.
5. Type in the ending date in the range, and then click on the Accept button.

A screen appears asking for you to confirm this deletion by date.

6. Click on the Yes button to perform the deletion, or click on the No button. If you choose Yes, you are notified that the deletion was successful. The Schedule screen reappears with the existing channel schedule for that channel. If you confirmed the deletion, all of the events on and between the specified dates are now deleted from the database.
7. Click on the Exit button to return to the Services Menu.

**Deleting An Entire Channel Schedule**

To delete an entire Channel Schedule:

1. Click on the Select button from the Channel Schedule Operations screen.
2. Type an optional cable (A or B) and the Channel Number, for instance, A38, then click on the Accept button.
3. Click on the DelChan button. A screen appears asking you to confirm this deletion.

4. Click on the Yes button to perform the deletion, or click on No. If you selected Yes, the system notifies you that the deletion was successful and displays a blank Schedule screen.
5. Click on the Exit button to return to the Services Menu.

To modify an event on a channel schedule:

1. Click on the Select button from the Channel Schedule Operations screen.
2. Type an optional cable (A or B) and the Channel Number.
3. Click on the Accept button.
4. Click on the Change button.
5. Press the Tab or Enter key to reach, or click on the field that you want to change.
6. Press F6 to clear the field, then type in your new entry.
7. Repeat steps 5 and 6 until done.
8. Click on the Accept button when you are finished.
9. Click on the Exit button to return to the Services Menu.

#### **Modifying an Event on a Channel Schedule**

The PSL Batch Utility gives you interactive access to the pay service loader program via the following options:

#### **PSL Batch Utility**

- Delete old and add new services from PSL files
- Add new services from PSL files
- Specify services to delete by service number
- Specify ranges to delete by service number
- Read configuration file pslconfig.dat
- Fix time/date blockage on automated delete
- Set start service numbers for service adds
- Set start tags for service adds
- Exit and execute requested commands
- Exit without executing commands

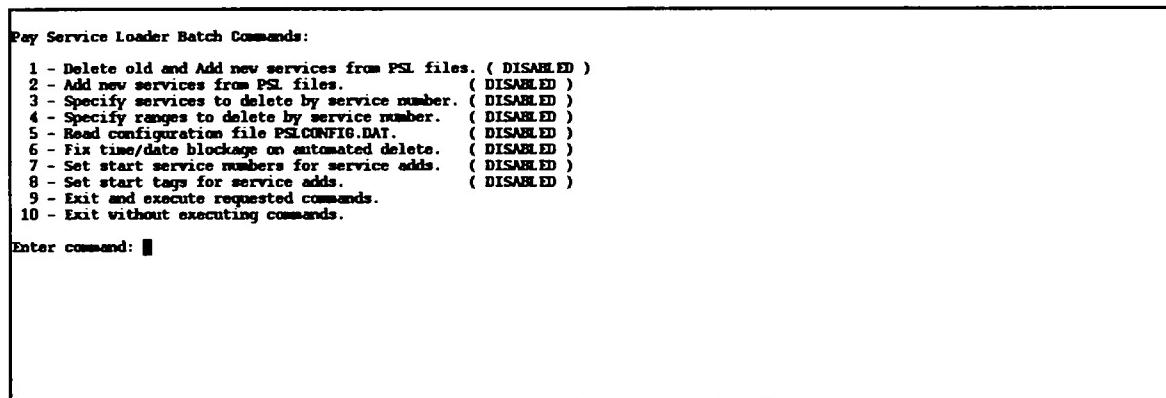
Typically, you do not run the PSL Batch Utility options unless:

- There is a problem with the pay services
- There is a system problem
- You make a change to the PSL configuration file
- PSL is being turned on for the first time

### **Deleting Old and Adding New Services from PSL Files**

For use in instances when PSL has not been running, this option deletes events past the PSL configuration file parameter [2], "Number Of Days To Hold Expired Services", and add events that fall within the window of PSL Configuration File parameter [3], "Number Of Days Ahead To Pre-Load Services." To delete old and add new services from the PSL files:

1. Click on the PSL Bat button to Invoke PSL Batch Utility from the Services Menu. The Pay Service Loader Batch Commands screen appears, offering you ten options.



*Pay Service Loader Batch Commands screen*

2. At the prompt to enter a command, type 1, then press the Enter key. This toggles the utility from disabled to enabled, as indicated. You remain at the main command list.
3. You can now use other options. Or to exit the Pay Service Loader Batch Commands screen and execute your requested commands, type 9, then press the Enter key. Or to exit the screen without executing your requested commands, type 10, then press the Enter key.

### **Adding New Services from PSL Files**

At the wake-up time specified in the pslconfig.dat file, on a daily basis PSL reviews the services in the input file in addition to services already copied to the pchanPPP.dat file, to find those to add to the current Pay Service File. This option gives you the opportunity to add new services from the PSL files, without waiting until the next day at the wake-up time. To add new services from the PSL files:

1. From the Pay Service Loader Batch Commands screen, at the prompt to enter a command, type 2, then press the Enter key. This toggles the utility from disabled to enabled, as indicated. You remain at the main command list.
2. To exit the Pay Service Loader Batch Commands screen and execute your requested commands, type 9, then press the Enter key. Or to exit the screen without executing your requested commands, type 10, then press the Enter key.

This option lets you enter a Service Number or list of Service Numbers for deletion from the current Pay Service File. To delete services by Service Number:

1. From the Pay Service Loader Batch Commands screen, at the prompt to enter a command, type 3, then press the Enter key. This displays the command list.

```

2 - Remove service number from the list.
3 - Cancel the list.
4 - Return to main command menu.

Enter command: 1
Enter service number: 10
Enter service number: 44
Enter service number: 58
Enter service number: 2
Enter service number: 4
Enter service number:

list of services selected for deletion:
      2      4      10     44      58

Commands:
1 - Construct a list of service numbers to be deleted.
2 - Remove service number from the list.
3 - Cancel the list.
4 - Return to main command menu.

Enter command: 
```

#### *Deleting Services by Service Number*

2. To construct a list of Service Numbers that you want to delete, at the prompt to enter a command, type 1, then press the Enter key. This displays a prompt for entering a Service Number.
3. Type a Service Number that you want to delete, then press the Enter key. This displays a prompt for another Service Number.
4. Repeat step 3 until you enter all of the Service Numbers that you want to delete. Then press the Enter key while at an enter Service Number prompt. This displays a list of the services that you selected for deletion and returns you to the command list.
5. If you want to remove an entry from the list, at the prompt to enter a command, type 2, then press the Enter key. This displays a prompt for entering a Service Number.
6. Type the Service Number that you want to remove, then press the Enter key. This displays a prompt for another Service Number.
7. Repeat step 6 until you enter all of the Service Numbers that you want to remove. Then press the Enter key while at an enter Service Number prompt. This displays an updated list of the services that you selected for deletion and returns you to the command list.
8. If you change your mind entirely about making any Service Number deletions, at the prompt to enter a command, type 3, then press the Enter key. This cancels the entire list.

#### **Deleting Services by Service Number**

9. To return to the main command menu, type 4, then press the Enter key. If you chose not to cancel the list, this toggles the utility from disabled to enabled, as indicated, and returns you to the main command menu.
10. You can now use other options. Or to exit the Pay Service Loader Batch Commands screen and execute your requested commands, type 9, then press the Enter key. Or to exit the screen without executing your requested commands, type 10, then press the Enter key.

### **Specifying Ranges of Service Numbers for Deletion**

This option lets you enter a range of Service Numbers for deletion from the current Pay Service File. To delete services by ranges of Service Numbers:

1. From the Pay Service Loader Batch Commands screen, at the prompt to enter a command, type 4, then press the Enter key. This displays the command list.

```

1 - Construct a list of service ranges to be deleted.
2 - Remove range from the list.
3 - Cancel the list.
4 - Return to main command menu.

Enter command: 1
Enter low service number: 66
Enter high service number: 71
Enter low service number: 4
Enter high service number: 8
Enter low service number:

ist of service ranges selected for deletion:
 4- 8    66- 71    66- 71
Commands:
1 - Construct a list of service ranges to be deleted.
2 - Remove range from the list.
3 - Cancel the list.
4 - Return to main command menu.

Enter command: ■

```

### *Specifying Ranges of Service Numbers for Deletion*

2. To construct a list of Service Number ranges that you want to delete, type 1, then press the Enter key. This displays a prompt for entering a low Service Number.
3. Type a starting Service Number for the range that you want to delete, then press the Enter key. The range must be entered in ascending order; for example, 1000 to 1030. Next there will be a prompt for a high Service Number.
4. Type an ending Service Number for the range that you want to delete, then press the Enter key. This displays a prompt for another low Service Number.
5. Repeat steps 3 and 4 until you enter all of the Service Number ranges that you want to delete. Then press the Enter key from a low Service Number prompt. This displays a list of the services ranges that you selected for deletion and returns you to the command list.
6. If you want to remove a range from the list, at the prompt to enter a command, type 2, then press the Enter key. This displays a prompt for entering a low number.

7. Type the starting Service Number for the range that you want to remove, then press the Enter key. This displays an updated list of the Service Number ranges that you selected for deletion and returns you to the command list.
8. Repeat step 7 until you enter all of the Service Number ranges that you want to remove.
9. If you change your mind entirely about making any Service Number range deletions, at the prompt to enter a command, type 3, then press the Enter key. This cancels the entire list.
10. To return to the main command list, type 4, then press the Enter key. If you chose not to cancel the list, this toggles the utility from disabled to enabled, as indicated, and returns you to the main command list.
11. You can now use other options. Or to exit the Pay Service Loader Batch Commands screen and execute your requested commands, type 9, then press the Enter key. Or to exit the screen without executing your requested commands, type 10, then press the Enter key.

On making a change to the PSL configuration file pslconfig.dat, you can use this option to make PSL read its configuration file so that a reboot is not necessary. To use this option:

1. From the Pay Service Loader Batch Commands screen, at the prompt to enter a command, type 5, then press the Enter key. This toggles the option from disabled to enabled, as indicated. You remain at the main command list.
2. You can now use other options. Or to exit the Pay Service Loader Batch Commands screen and execute your requested commands, type 9, then press the Enter key. Or to exit the screen without executing your requested commands, type 10, then press the Enter key.

You must be careful when selecting this option. If an error is generated that "Too much time has passed since the last delete," this option resets the PSL's internal date for the last successful delete. PSL generates this error as a fail safe measure in case an incorrect date is entered. Changing the PSL's internal date by entry of an incorrect day, month or year can wipe out part or all of the current Pay Service File. To fix time and date blockage on automated deletion:

1. From the Pay Service Loader Batch Commands screen, at the prompt to enter a command, type 6, then press the Enter key. This toggles the option from disabled to enabled, as indicated. You remain at the main command list.

#### **Reading the PSL Configuration File**

#### **Fixing Time and Date Blockage on Automated Deletion**

2. You can now use other options. Or to exit the Pay Service Loader Batch Commands screen and execute your requested commands, type 9, then press the Enter key. Or to exit the screen without executing your requested commands, type 10, then press the Enter key.

### **Setting a Starting Service Number for a Service Addition**

This option is rarely used because the Service Numbers are generally provided in the input files. But, should you need it, you can use this option to specify a value for the starting Service Number. PSL responds by updating its internal next Service Number. You can only update one channel per session. To set a starting Service Number for a service addition:

1. From the Pay Service Loader Batch Commands screen, at the prompt to enter a command, type 7, then press the Enter key. This displays a prompt for entering the service provider string associated with the channel that you want to work with.

```

6 - Fix time/date blockage on automated delete. ( ENABLED )
7 - Set start service numbers for service adds. ( DISABLED )
8 - Set start tags for service adds. ( DISABLED )
9 - Exit and execute requested commands.
10 - Exit without executing commands.

Enter command: 7
Enter pay service provider string (eg. CVS) associated with channel: HBO
Enter starting service number: 101

Pay Service Loader Batch Commands:

1 - Delete old and Add new services from PSL files. ( ENABLED )
2 - Add new services from PSL files. ( ENABLED )
3 - Specify services to delete by service number. ( ENABLED )
4 - Specify ranges to delete by service number. ( ENABLED )
5 - Read configuration file PSLCONFIG.BAT.
6 - Fix time/date blockage on automated delete. ( ENABLED )
7 - Set start service numbers for service adds. ( HBO 101 )
8 - Set start tags for service adds. ( DISABLED )
9 - Exit and execute requested commands.
10 - Exit without executing commands.

Enter command: 
```

### *Setting a Starting Service Number for a Service Addition*

2. Type the service provider string in **upper case characters**, then press the Enter key. This displays a prompt for entering the starting Service Number.
3. Type the starting Service Number, then press the Enter key. This returns you to the main command list. The service provider string and the starting Service Number appear in place of the disabled flag. The system returns you to the main command list.
4. You can now use other options. Or to exit the Pay Service Loader Batch Commands screen and execute your requested commands, type 9, then press the Enter key. Or to exit the screen without executing your requested commands, type 10, then press the Enter key.

### **Setting a Starting Tag for a Service Addition**

Use this option when the starting tag has to be reset due to using a limited range of numbers. PSL responds by updating its internal next tag. You can only update one channel per session. To set a starting tag for a service addition:

1. From the Pay Service Loader Batch Commands screen, at the prompt to enter a command, type 8, then press the Enter key. This displays a prompt for entering the service provider string associated with the channel that you want to work with.

```

6 - Fix time/date blockage on automated delete. ( ENABLED )
7 - Set start service numbers for service addis. ( HBO 101 )
8 - Set start tags for service addis. ( DISABLED )
9 - Exit and execute requested commands.
10 - Exit without executing commands.

Enter command: 8
Enter pay service provider string (eg. CVS) associated with channel: TMC
Enter starting tag: 82

Pay Service Loader Batch Commands:

1 - Delete old and Add new services from PSL files. ( ENABLED )
2 - Add new services from PSL files.
3 - Specify services to delete by service number. ( ENABLED )
4 - Specify ranges to delete by service number. ( ENABLED )
5 - Read configuration file PSLCONFIG.DAT.
6 - Fix time/date blockage on automated delete. ( ENABLED )
7 - Set start service numbers for service addis. ( HBO 101 )
8 - Set start tags for service addis. ( TMC 82 )
9 - Exit and execute requested commands.
10 - Exit without executing commands.

Enter command: 

```

### *Setting a Starting Tag for a Service Addition*

2. Type the service provider string in **upper case characters**, then press the Enter key. This displays a prompt for entering the starting tag (Service Code).
3. Type the starting tag, then press the Enter key. This returns you to the main command list. The service provider string and the starting service tag appear in place of the disabled flag. The system returns you to the main command list.
4. You can now use other options. Or to exit the Pay Service Loader Batch Commands screen and execute your requested commands, type 9, then press the Enter key. Or to exit the screen without executing your requested commands, type 10, then press the Enter key.

To exit the Pay Service Loader Batch Commands screen and execute any commands that you requested via options 1 to 8:

1. From the Pay Service Loader Batch Commands screen, at the prompt to enter a command, type 9, then press the Enter key. This submits a batch file to the PSL for processing.

To cancel your requested commands and exit the Pay Service Loader Batch Commands screen:

1. From the Pay Service Loader Batch Commands screen, at the prompt to enter a command, type 10, then press the Enter key. In this case, any commands that you requested via options 1 to 8 are discarded.

### **Exiting and Executing Requested Commands**

### **Cancelling Requested Commands and Exiting**



## 7 • Headend Equipment

At the headend you must have one scrambler per hub, per premium channel that you want scrambled to unauthorized converters. Scramblers can be of the following types:

### Introduction

Scrambler	Description
<i>STARPACK™ Service Encoder (SSE)</i>	One of the earliest scramblers. The SSE scrambling modes (sync suppression - standby and 6 dB constant) are emulated by all later scramblers.
<i>Digital Scrambler/Encoder (DS/E)</i>	An early model scrambler, capable of scrambling RF signals only.
<i>Digital Video/Encoder (DV/E)</i>	An early model scrambler, capable of scrambling baseband only. It is used as a complement to the DS/E.
<i>Video Processor/Encoder (VP/E)</i>	An early scrambler package including a DS/E and DV/E.
<i>Modulating Video Processor (MVP), types I and II</i>	The latest, most advanced series of scramblers. MVP scramblers with firmware level C0.5 or higher are required to use the in-band barker feature of Message Manager.

The Headend Equipment Information screen lets you add, modify, and delete scramblers, look at their queues, change their dynamic mode from the ACC-4000 system, and perform other functions.

The following procedure lets you add a scrambler to the ACC-4000 Controller's database:

### Adding a Scrambler

1. Click on the Headend button from the Main Menu to access the Headend Equipment Information screen.

ACC4000

Help

HEINFO	Headend Equipment Information	
Scrambler ID:	<input type="text" value="261111"/>	Name: <input type="text" value="CH27DSE"/> Channel Number: <input type="text" value="A27"/>
Description:	<input type="text"/>	
Scrambler Model Number:	<input type="text"/>	Respond Status: <input checked="" type="checkbox"/>
Default Service Code (2-256):	<input type="text" value="99"/>	Automatic Control (Y/N): <input checked="" type="checkbox"/>
Starport (Y/N) :	<input checked="" type="checkbox" value="N"/>	Two Way (Y/N): <input checked="" type="checkbox"/>
DV/E or MVP Present (Y/N):	<input checked="" type="checkbox" value="Y"/>	DV/E Model Number: <input type="text"/>
<b>DEFAULT SCRAMBLING MODES</b>		
MVP Emulation (0-7) / Sync Suppression (1-9) :	<input type="text" value="0"/> / <input type="text" value="1"/>	
Video Inversion (A-F, and - for clear):	<input type="text" value="F"/>	
Audio Inversion (Y/N):	<input checked="" type="checkbox" value="N"/>	
<b>PROGRAMMABLE MODES</b>		
Dynamic Mode Type (1-8):	<input type="text" value="2"/>	
Time Interval (HH:MM:SS:TT):	<input type="text" value="00 20 00 05"/>	
<input type="button" value="Add"/> <input type="button" value="Select"/> <input type="button" value="Change"/> <input type="button" value="Delete"/> <input type="button" value="Read"/> <input type="button" value="Set"/> <input type="button" value="Clear"/> <input type="button" value="Show"/> <input type="button" value="Q"/> <input type="button" value="SetMode"/> <input type="button" value="GetMode"/> <input type="button" value="Zoom"/> <input type="button" value="Exit"/> <input type="button" value="Accept"/> <input type="button" value="Cancel"/>		
Press a function key/button, followed by data entry, then Accept/Cancel Enter unique address between 260096 and 262143 (or zoom for list).		
<b>F6:Clear Field      F7:Field Help      F8:Form Help</b>		

*Headend Equipment Information screen*

This screen includes the following fields for data entry. In cases where the controller populates a field for you or bars access to a field, we mention this in the description.

Field	Description
<i>Scrambler ID</i>	A unique six-digit integer field from 260096 through 262143 identifying the hardware address of the scrambler. Remember not to assign a Converter IDs in this range.
<i>Name</i>	A ten alphanumeric character field further identifying the scrambler.
<i>Channel Number</i>	An optional cable (A or B) precedes the three digit integer channel. When you do not designate a cable, the default is A. The valid range for a channel is from 1 through 256. This identifies the channel that the scrambler becomes associated with in the pay service record.
<i>Description</i>	An optional 30 character alphanumeric field describing the scrambler. For example, you may want to give the scrambler's location.

<b>Field (cont'd)</b>	<b>Description (cont'd)</b>
<i>Scrambler Model Number</i>	An optional eight character alphanumeric field for entering the model number of the scrambler.
<i>Respond Status</i>	The ACC-4000 populates this single alpha character field with Y or N, indicating whether the scrambler responded the last time it was polled. This applies only to scramblers enabled for two-way communication from the headend by the <i>Two Way</i> field on this screen. This field remains blank for a one-way scrambler.
<i>Default Service Code</i>	A three-digit integer field having a valid range from 2 through 256. We recommend that you choose an unused Service Code. The recommended range is 2 through 255, as the controller may use 256 for other purposes. This identifies the Service Code used between PPV events (the interstitial mode) when automatic control is set to Y, or for subscriptions.
<i>Automatic Control</i>	A single alpha character field requiring an entry of Y or N. This determines if the scrambler is under constant control by the ACC-4000. Continual updating from the controller is then automatic. When you assign a scrambler non-automatic control, updates must take place either manually in the local mode, or on an individual basis from the controller if the two are connected together.
<i>Two Way</i>	A single alpha character field requiring an entry of Y or N. This indicates if the scrambler is capable of two-way communications with the controller.
<i>Starport</i>	A single alpha character field requiring an entry of Y or N. This indicates if a STARPORT™ addressable control module is used.
<i>DV/E or MVP Present</i>	A single alpha character field having a value of Y or N. A Y indicates that the scrambler is a DV/E or a MVP.
<i>DV/E Model Number</i>	An optional eight alphanumeric character field, specifying the Scrambler Model Number.

<b>Field (cont'd)</b>	<b>Description (cont'd)</b>
<i>MVP Emulation</i>	<p>A one-digit integer field having a valid range of 0 (zero) through 7, specifying the emulation mode, where:</p> <ul style="list-style-type: none"> <li>0 = the scrambler uses its dip switch configuration</li> <li>1 = DS/E, a General Instrument standard mode. Use this mode when you have only RF type converters</li> <li>2 = VP/E, a General Instrument standard mode. Use this mode when you have only baseband-type converters</li> <li>3 = mixed, a General Instrument standard mode. Use this mode when you have both RF and baseband-type converters</li> <li>4 = SSE, a General Instrument standard mode</li> <li>5 = special, for modes that are not General Instrument standard</li> <li>6 = special, for modes that are not General Instrument standard</li> <li>7 = not used, and defaults to DS/E</li> </ul>
<i>Sync Suppression</i>	<p>A one-digit integer field having a range from 1 through 9, for specifying the scrambling mode, where:</p> <ul style="list-style-type: none"> <li>1 = standby</li> <li>2 = clear, 0 dB constant</li> <li>3 = 6 dB constant</li> <li>4 = 10 dB constant</li> <li>5 = Scene change, 3 seconds</li> <li>6 = 6/10 pseudo random, 30 seconds</li> <li>7 = 6/10 pseudo random, 1 minute</li> <li>8 = 6/10 pseudo random, 16 tics</li> <li>9 = 6/10 pseudo random, 3 seconds</li> </ul>

<b>Field (cont'd)</b>	<b>Description (cont'd)</b>
<i>Video Inversion</i>	<p>A single alpha character field having a range of values of A through F or – (hyphen) indicating the type of video inversion to use where:</p> <ul style="list-style-type: none"> <li>– = clear</li> <li>A = scene change field inversion</li> <li>B = scene change field inversion</li> <li>C = constant video inversion</li> <li>D = constant field inversion</li> <li>E = timed field inversion</li> <li>F = timed field inversion</li> </ul> <p>You can only access this field when you have <i>DV/E</i> or <i>MVP Present</i> set to Y, as video inversion works only with baseband mode converters.</p>
<i>Audio Inversion</i>	<p>A single alpha character field having a value of Y or N. This indicates whether Audio Inversion is to be used. You can only access this field when you have <i>DV/E</i> or <i>MVP Present</i> set to Y, as video inversion works only with baseband mode converters.</p>
<i>Dynamic Mode Type</i>	<p>A one-digit integer field having a range from 1 through 8, indicating the dynamic mode type where:</p> <ul style="list-style-type: none"> <li>1 = pseudo-random 6/10/clear</li> <li>2 = pseudo-random 6/clear</li> <li>3 = pseudo-random 10/clear</li> <li>4 = pseudo-random 6/10</li> <li>5 = linear 6/10/clear</li> <li>6 = linear 6/clear</li> <li>7 = linear 10/clear</li> <li>8 = linear 6/10</li> </ul>

<b>Field (cont'd)</b>	<b>Description (cont'd)</b>
<i>Time Interval</i>	<p>Comprised of four two-digit integer fields having the format HH:MM:SS:TT, for hours:minutes:seconds:tics. The valid ranges for your entries are:</p> <p style="margin-left: 40px;">0 (zero) through 23 for hours</p> <p style="margin-left: 40px;">0 (zero) through 59 for minutes.</p> <p style="margin-left: 40px;">0 (zero) through 59 for seconds.</p> <p style="margin-left: 40px;">0 (zero) through 59 for tics.</p> <p>This indicates the dynamic mode time interval.</p>

For additional information on using these fields, read your scrambler installation manual.

2. Click on the Add button.
3. Type in the scrambler ID for the scrambler that you want to add.
4. Press the Enter key to move the cursor to the Name field.
5. Type the scrambler's name, then press the Enter key.
6. Enter information in the fields applying to the scrambler model that you are working with.
7. Click on the Accept button. A message appears at the bottom of the screen announcing that the scrambler has been successfully added to the ACC-4000. The new scrambler information remains on the screen until you click on the Add or Select button.

## **Modifying Scrambler Information**

The following procedure lets you modify information for a scrambler:

1. Click on the Select button from the Headend Equipment Information screen.
2. Type in the scrambler ID for the scrambler information that you want to view or modify, or use the Zoom function to find the one that you want.
3. Click on the Change button to drop the cursor to the description field.

4. Press the Tab or Enter key repeatedly until the cursor is on a field that you want to change.
5. Press F6 to clear the current information in this field.
6. Type in your modification.
7. Repeat these steps until you finish making changes.
8. Click on the Accept button. The message "Performing requested operation, please wait...." appears. The changes are added to the ACC-4000 system. You are returned to the Headend Equipment Information screen. This operation can take several minutes if the system has a large number of scramblers under automatic control.

To delete a scrambler from the ACC-4000's database:

1. Click on the Select button from the Headend Equipment Information screen.
2. Type the Scrambler ID of the scrambler that you want to delete.
3. Click on the Delete button. A screen appears asking if you are sure that the indicated scrambler is the one that you want to delete.
4. Click on the Yes button if you are want to delete the scrambler; otherwise, click on the No button. On clicking the Yes button, the message "Performing requested operation, please wait...." appears while the scrambler is being deleted from the database. This operation takes several minutes when there are a large number of scramblers under automatic control.

Afterward, you remain in the Headend Equipment Information screen so that you can continue adding or modifying scrambler information.

## **Deleting a Scrambler**

A DV/E, VP/E, or MVP scrambler in two-way mode comes equipped with built-in memory holding up to 63 entries, called queues. A DS/E, requires a memory upgrade (if not already installed) to provide this feature. The queues retain upcoming event times to be scrambled. In the event the controller becomes inactive, a scrambler has its own internal clock and advances to the service codes for all queues previously loaded.

To set up an individual queue for a scrambler under non-automatic control:

## **Setting an Individual Queue**

- With the scrambler of your choice displayed on the Headend Equipment Information screen, click on the Set button. The Direct Control of Headend Equipment screen appears.

ACC4000 [Help](#)

HECTL	Direct Control of Headend Equipment																					
Scrambler ID: <b>261111</b> Name: <b>CH27DSE</b> Channel Number: <b>A27</b>																						
<table border="0" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;">Service Code:</td> <td><b>196</b></td> <td>Scramble Preview (Y/N): <b>N</b></td> <td>SCRAMBLER STATUS</td> </tr> <tr> <td>Morality Rating:</td> <td><b>P</b></td> <td>Purchaseable (Y/N): <b>N</b></td> <td></td> </tr> <tr> <td>Price:</td> <td><b>0.00</b></td> <td>Encryption (Y/N): <b>N</b></td> <td>Remote Entry: <b>N</b></td> </tr> <tr> <td></td> <td></td> <td>Encryption Key (A/B): <b>A</b></td> <td>Valid Entry: <b>Y</b></td> </tr> <tr> <td></td> <td></td> <td></td> <td>Executed Entry: <b>N</b></td> </tr> </table>			Service Code:	<b>196</b>	Scramble Preview (Y/N): <b>N</b>	SCRAMBLER STATUS	Morality Rating:	<b>P</b>	Purchaseable (Y/N): <b>N</b>		Price:	<b>0.00</b>	Encryption (Y/N): <b>N</b>	Remote Entry: <b>N</b>			Encryption Key (A/B): <b>A</b>	Valid Entry: <b>Y</b>				Executed Entry: <b>N</b>
Service Code:	<b>196</b>	Scramble Preview (Y/N): <b>N</b>	SCRAMBLER STATUS																			
Morality Rating:	<b>P</b>	Purchaseable (Y/N): <b>N</b>																				
Price:	<b>0.00</b>	Encryption (Y/N): <b>N</b>	Remote Entry: <b>N</b>																			
		Encryption Key (A/B): <b>A</b>	Valid Entry: <b>Y</b>																			
			Executed Entry: <b>N</b>																			
<b>DEFAULT SCRAMBLING MODES</b> MVP Emulation (0-7) / Sync Suppression (1-9) : <b>0 / 3</b> Video Inversion (A-F, and - for clear): <b>F</b> Audio Inversion (Y/N): <b>N</b>																						
Queue Entry Number: <b>0</b> Date: <b>08/16/94</b> Time: <b>12:24</b>																						
<a href="#">Add</a>   <a href="#">Select</a>   <a href="#">Change</a>   <a href="#">Delete</a>   <a href="#">Read</a>   <a href="#">Set</a>   <a href="#">Clear</a>   <a href="#">Show Q</a>   <a href="#">SetMode</a>   <a href="#">GetMode</a>   <a href="#">Zoom</a>   <a href="#">Exit</a>																						
<span style="border-bottom: 1px solid black; padding: 0 2px;">Accept</span> — <span style="border-bottom: 1px solid black; padding: 0 2px;">Cancel</span>																						
Press a function key/button, followed by data entry, then Accept/Cancel																						
<b>F6:Clear Field</b> <b>F7:Field Help</b> <b>F8:Form Help</b>																						

#### *Direct Control of Headend Equipment screen*

This screen includes some fields that are repeated from the Headend Equipment Information screen, as well as these additional fields:

Field	Description
<i>Morality Rating</i>	A single alpha character field. The values that you can enter are G, P, X, or R. This field reflects the Motion Picture Industry Association rating for an event, or the overall rating for a service. This feature is only available on XT5 (STARCOM V) converters.
<i>Price</i>	An eight character amount field having the format DDDDD.CC, where DDDDD is the dollar amount, followed by a decimal point, and CC is for cents. This indicates the price that you are charging for the service.

<b>Field (cont'd)</b>	<b>Description (cont'd)</b>
<i>Scramble Preview</i>	A single alpha character field having a value of Y or N. A Y selection sets the scrambler to preview mode. This allows: <ul style="list-style-type: none"> <li>• Converters enabled for impulse purchases to view the event in an unscrambled format during the preview period.</li> <li>• Converters enabled for cancellation during preview to cancel an event they have previously purchased during the preview period.</li> </ul>
<i>Purchasable</i>	A single alpha character field having a value of Y or N. A Y indicates that this event is impulse purchasable to converters equipped with that feature..
<i>Encryption</i>	A single alpha character field having a value of Y or N. This indicates if your system is configured for the additional scrambling technique controlled in the configuration file (config.dat) by parameter [278].
<i>Encryption Key</i>	A single alpha character field having a value of A or B. This reflects the settings of configuration file (config.dat) parameters [279] through [281].
<i>Queue Entry Number</i>	A two-digit integer field having a range of values from 0 (zero) through 63. A zero indicates immediate service while values 1 through 63 indicate that the queue is for future use.
<i>Date</i>	Comprised of three two-digit integer fields having the format MM/DD/YY, where MM is the month, DD is the day, and YY is the year (for example, 01/05/94). The default date is the current date. This indicates the start date for the service in this queue.
<i>Time</i>	Comprised of two two-digit integer fields having the format HH:MM, where HH is the hour with a range from 0 (zero) through 23, and MM is the minute with a range from 0 (zero) through 59. The default time is the current time. This indicates the start time for the service in this queue.

<b>Field (cont'd)</b>	<b>Description (cont'd)</b>
<i>Remote Entry</i>	A single alpha character field having a value of Y or N. The controller sets this field automatically after you press the Accept key on completing your queue entry. This indicates the Remote/Local setting on the front of the scrambler.
<i>Valid Entry</i>	A single alpha character field having a value of Y or N. The controller sets this field automatically after you press the Accept key on completing your queue entry. This indicates whether the queue is valid or not.
<i>Executed Entry</i>	A single alpha character field having a value of Y or N. The controller sets this field automatically to Y once the queue is executed.

2. Enter information in the fields to set up a queue for the scrambler that you are working with.
3. Click on the Accept button. A message appears at the bottom of the screen announcing that the queue has been successfully added to the scrambler.

## **Looking at a Scrambler's Queues**

Check the scrambler queues occasionally to verify the proper operation of the ACC-4000 and always before a high volume PPV event.

To see a scrambler's queues:

1. With the scrambler of your choice displayed on the Headend Equipment Information screen, click on the Show Q button. The Output for Show DSE Queue Information screen appears.

ACC4000 [Help](#)

**SHOWQOUT** | Specify Report Output Device

Scrambler ID:	261111	Name:	CH27DSE	Channel Number:	A27
Description:					
Scramble:	Output for Show DSE Queue Information				
Default Starport:					
DV/E or	Direct Output to: <input checked="" type="checkbox"/> ( Screen   Printer   DiskFile )				
Number of copies:	1	Disk Filename: showq.rp			
DEFAULT					
MVP Em.	<input type="button" value="Accept"/>		<input type="button" value="Cancel"/>		
Video					
Audio Inversion (Y/N):	<input checked="" type="checkbox"/>				
<b>PROGRAMMABLE MODES</b>					
Dynamic Mode Type (1-8):	<input type="checkbox"/>				
Time Interval (HH:MM:SS:TT):	00 20 00 05				
Add	Select	Change	Delete	Read	Set
Clear	Show Q	SetMode	GetMode	Zoom	Exit
<input type="button" value="Accept"/>	<input type="button" value="Cancel"/>				
Press the ACCEPT function key/button to initiate this operation					
<input type="button" value="F6:Clear Field"/>		<input type="button" value="F7:Field Help"/>		<input type="button" value="F8:Form Help"/>	

*Specify Report Option Device / Output for Show DSE Queue Information screen*

2. Indicate where to direct the report (to the screen, printer, or disk file) and the number of copies that you want. Click on the Accept button to generate the DSE Queue Listing.

```
***** DS/E Queue Listing *****

DS/E Id number -- 261111
DS/E is in LOCAL mode
Programmable scrambler mode: 2
Programmable scrambler timing: 00:20:00:05
Could not read Signature, status = 5      3      5

Queue Entry Start Time     Status   Service Code Agile DS/E Mode DVE Mode Audio Scram Price Morality Rating Pur Enqr Descr Key Prev ibb type slect msg
Current 8/12/94 10:14      196    N     1   G  No $ 0. 0   2   No  N   A   N   0   0   0
1       12/30/93 13:58 executed 17     N     33  CLR No $ 0. 0   3   No  N   A   N   0   0   0
2       Invalid queue entry

**** No more valid queue entries for this DS/E ****
Enter Return to Continue
```

*Sample DS/E Queue Listing*

The fields appearing on this report have labels that often do not match the labels appearing on the Headend Equipment Information screen and the Direct Control of Headend Equipment screen. The following table shows these field relationships. As noted in the comments column, a few fields also come from the Message Manager.

<b>Field Name on Report</b>	<b>Field Name on Screens</b>	<b>Comments</b>
<i>DS/E Id number</i>	Scrambler ID	
<i>Programmable scrambler mode</i>	Dynamic Mode	Type
<i>Programmable scrambler timing</i>	Time Interval	
<i>Agile</i>	Not present	An old scrambling technique that employed the service code. It is no longer used, so you can ignore this field on the report.
<i>DS/E Mode</i>	MVP Emulation plus Sync Suppression	On the report, these two fields appear directly against one another.
<i>DVE Mode</i>	Video Inversion	
<i>Audio Scram</i>	Audio Inversion	
<i>Price</i>	Price*	

<b>Field Name on Report (cont'd)</b>	<b>Field Name on Screens (cont'd)</b>	<b>Comments (cont'd)</b>
<i>Morality Rating</i>	Morality Rating*	
<i>Pur</i>	Purchasable*	
<i>Encr</i>	Encryption*	
<i>Descr Key</i>	Encryption Key*	
<i>Prev</i>	Scramble Preview*	
<i>ibb type</i>	Not present	The in-band-barker (IBB) method number. For details, refer to your <i>Message Manager User Guide</i> .
<i>ibb slct</i>	Not present	The data field in an IBB map. For details, refer to your <i>Message Manager User Guide</i> .
<i>ibb msg</i>	Not present	The IBB message number. For details, refer to your <i>Message Manager User Guide</i> .

\* Appears on the Direct Control of Headend Equipment screen

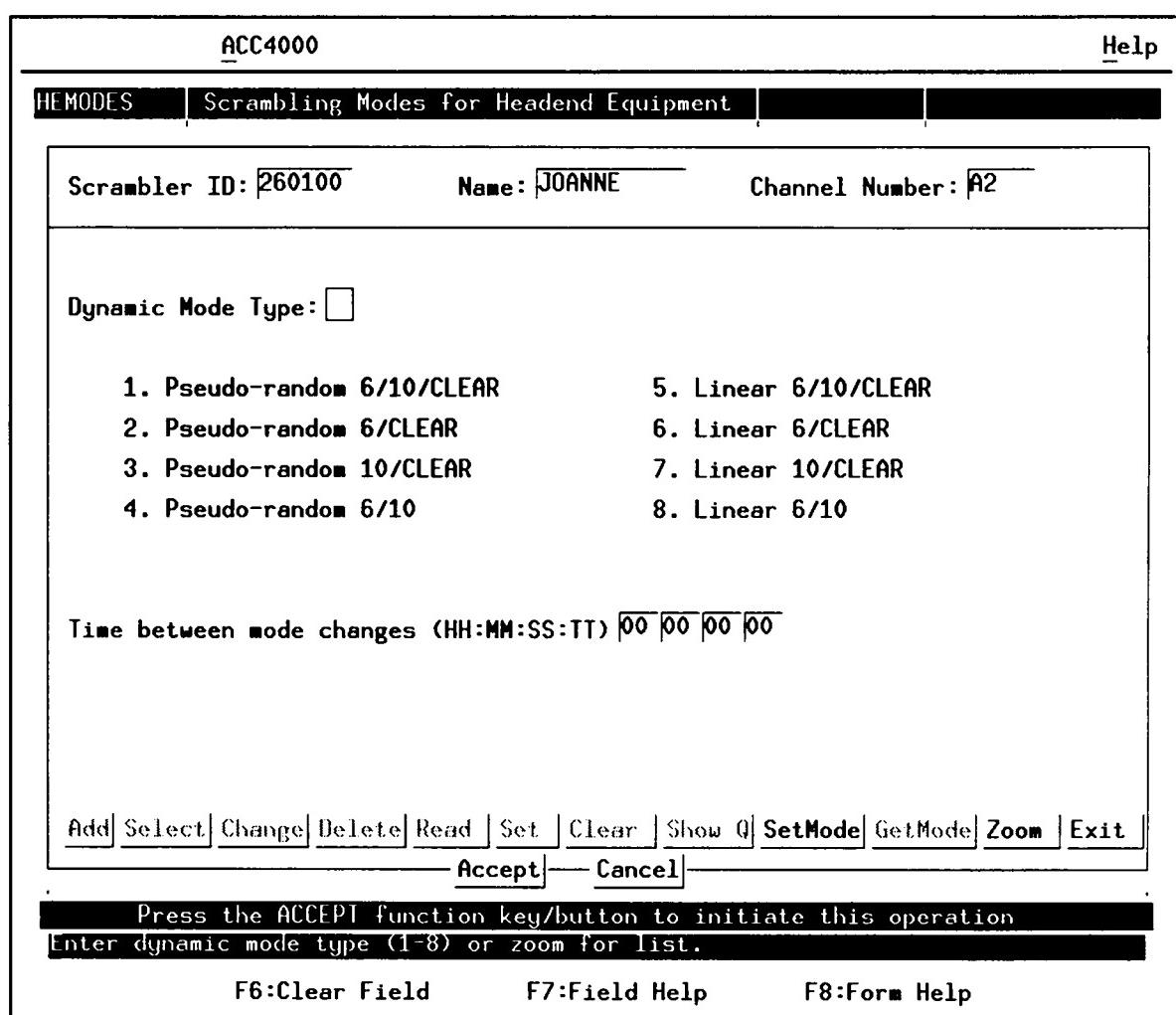
3. Click on the Exit button. This returns you to the Headend Equipment Information screen.

## Changing Dynamic Mode

When you do not have a scrambler set to automatic control on the Headend Equipment Information screen and you have it set to remote mode from its front panel, you can change its dynamic mode from the controller.

To modify a scrambler's dynamic mode:

- With the scrambler of your choice displayed on the Headend Equipment Information screen, click on the SetMode button. The Headend Modes screen appears, listing the dynamic modes available.



*Scrambling Modes for Headend Equipment screen*

- The cursor is positioned in the Dynamic Mode Type field. Type in the number of the dynamic mode that you want.
- Enter a time interval in the Time Between Mode Changes field.
- Click on the Accept button. "Communicating with DSE..." appears at the bottom of the screen. A window then appears stating "DSE scrambling mode set," indicating that the operation was successful. Click on the Continue button.
- Click on the Exit button. This returns you to the Main Menu.

The Headend Equipment Information screen also offers you these functions:

*Get Mode* Only for two-way scramblers, this function reads the dynamic mode and time.

*Read* Only for two-way scramblers, this function reads an individual queue.

*Clear* Only for non-automatic control, this function clears all queues.

## **Other Functions**



## 8 • Converter Types

This chapter presents information about the kinds of converters that are supported by this release of the ACC-4000, and about the relationships that channel, frequency, output, and static maps have to these converters. Specifically, you will learn about:

- Displaying and modifying converter type information
- Displaying, modifying, and adding the channel, output, frequency, and static maps associated with converters
- Unassigning existing channel maps

Many converter types are currently in use within the cable industry. Each type of converter requires that the controller record and keep track of a relatively large number of converter attributes and features. To make it easier to manage converters, the ACC-4000 comes with a predefined template for each of the major converter types:

### Before You Begin

### About Converter Type Templates

Type	Name	Model	Partition Type *
1	DRZ STARCOM II, 400, 450	DRZ	O
2	DRZA STARCOM 450	DRZA-*A, DRZP-*A	O
3	DRZI STARCOM 450/P3	DRZI*-*AT	O
4	DRZI AT STARCOM 450	DRZI*-.AT	T
5	XT5 STARCOM V	XT5-*1*	O
6	XT5 STARCOM V	XT5-*2*	T
7	DRZI AV STARCOM 450	DRZI*-*AV	O
8	DP5 STARCOM 6+	DP*5-*3*	P
9	DL4 STARCOM V	DL4/DL4A	O
10	DP5 STARCOM 6+	DP*5-*1*	O
11	DP5 STARCOM 6+	DP*5-*2*	T
12	DPBB STARCOM 6+	DPBB-*1*	O
13	DPBB STARCOM 6+	DPBB-*3*	P
14	DPBB STARCOM 6+	DPBB-*2*	T
15	DP7 IMPULSE 7000	DP711*, DPV721*, DPV721*/C1	O
16	DP7 IMPULSE 7000	DP713*, DPV723*, DPV723*/C1	P
17	DP7 IMPULSE 7000	DP712*, DPV722*, DPV722*/C1	T
18	DP7 IMPULSE 7000	DPBB7-*1*	O
19	DP7 IMPULSE 7000	DPBB7-*3*	P

20	DP7 IMPULSE 7000	DPBB7-*2*	T
21	DPBB 6+ Master/Slave	DPBB-*1*-M1	O
22	DPBB 6+ Master/Slave	DPBB-*3*-M1	P
23	DPBB 6+ Master/Slave	DPBB-*2*-M1	T
24	IDP7 International	International	O
25	IDP7 International	International	P
26	IDP7 International	International	T
27	DCR	DCR	O
28	DCR	DCR	P
29	DCR	DCR	T
30	CFT-2000	CFT-2000	O
31	CFT-2000	CFT-2000	P
32	CFT-2000	CFT-2000	T
33	STARPORT	STARPORT	O
34	STARPORT	STARPORT	P
35	STARPORT	STARPORT	T

\* O = One-way  
 T = Two-way  
 P = FONE-way

Each template lists the relevant parameters for each converter type, and each converter parameter is assigned a default value representing the most commonly encountered value or setting for that type of converter.

Set parameter [245] International converter flag, in your system configuration file config.dat to T for true when using international CFT-2000 converters.

#### Your System's Converter Type Default

To simplify various administrative procedures, the ACC-4000 allows you to select a converter type as the system default. Then, whenever you need to perform the same procedure repeatedly for the same type of converter, that converter's information is automatically supplied. For example, when manually adding a number of STARCOM 7100 converters to your system, the STARCOM 7100 converter template automatically appears. The default converter type is changed by modifying its value in the system configuration file, config.dat.

#### About Maps

Converters use maps to associate tuned channels with displayed channels, to locate frequencies, and to match, for STARPORT converters, service codes with logical channels. Each converter has at least one map, whether it is a channel or frequency map, and some converter types have more than one kind of map. Converters with more than one type of map include:

- |                                 |   |
|---------------------------------|---|
| <i>International converters</i> | International type converters have channel, frequency, and output maps. |
| <i>STARPORT modules</i>         | STARPORT modules have channel and static maps.                          |

**If your cable system has more than one channel map in use, do not broadcast the channel map globally unless you specifically wish that all converters in the system have this channel map.**

The ACC-4000 lets you define up to 99 channel maps, 99 frequency maps, 99 output maps, and one static map.

Each converter has at least one channel map which associates tuned channels with displayed channels. These associations are modifiable. For example, Channel A14 may be displaying tuned channel A03, but you need to change the display channel for A03 to A33. You make this modification on a converter's channel map.

A frequency map is a list of audio frequencies which describe the starting location of the audio carriers for each channel. Each frequency is associated with a tuned channel. You can modify these associations and adjust the frequency spacing for the international and DCR converters on your system.

The output maps, one of the three types of international converter maps, associate the UHF output channel with a starting audio frequency. You can modify this association and adjust the frequency spacing.

STARPORT modules are the only converter types that have static as well as channel maps. The static map associates logical channels with Service Codes. You can modify both the channels and the Service Codes.

When a converter template is modified, converters previously configured with the template are not changed. However, the changes do apply to all converters configured or reloaded (refreshed) from that moment on.

Most users will not have authorization to change default converter information. They may only access this information in a display mode. Converters cannot be modified while in the display mode.

To look at default converter information for a particular type of converter:

1. Click on the ConvTyp button to select the Converter Types option on the Main Menu.

The Converter Type Selection screen appears, and the cursor is in the Converter Type field. If there is a value in the field that you don't want, use F6 to delete it.

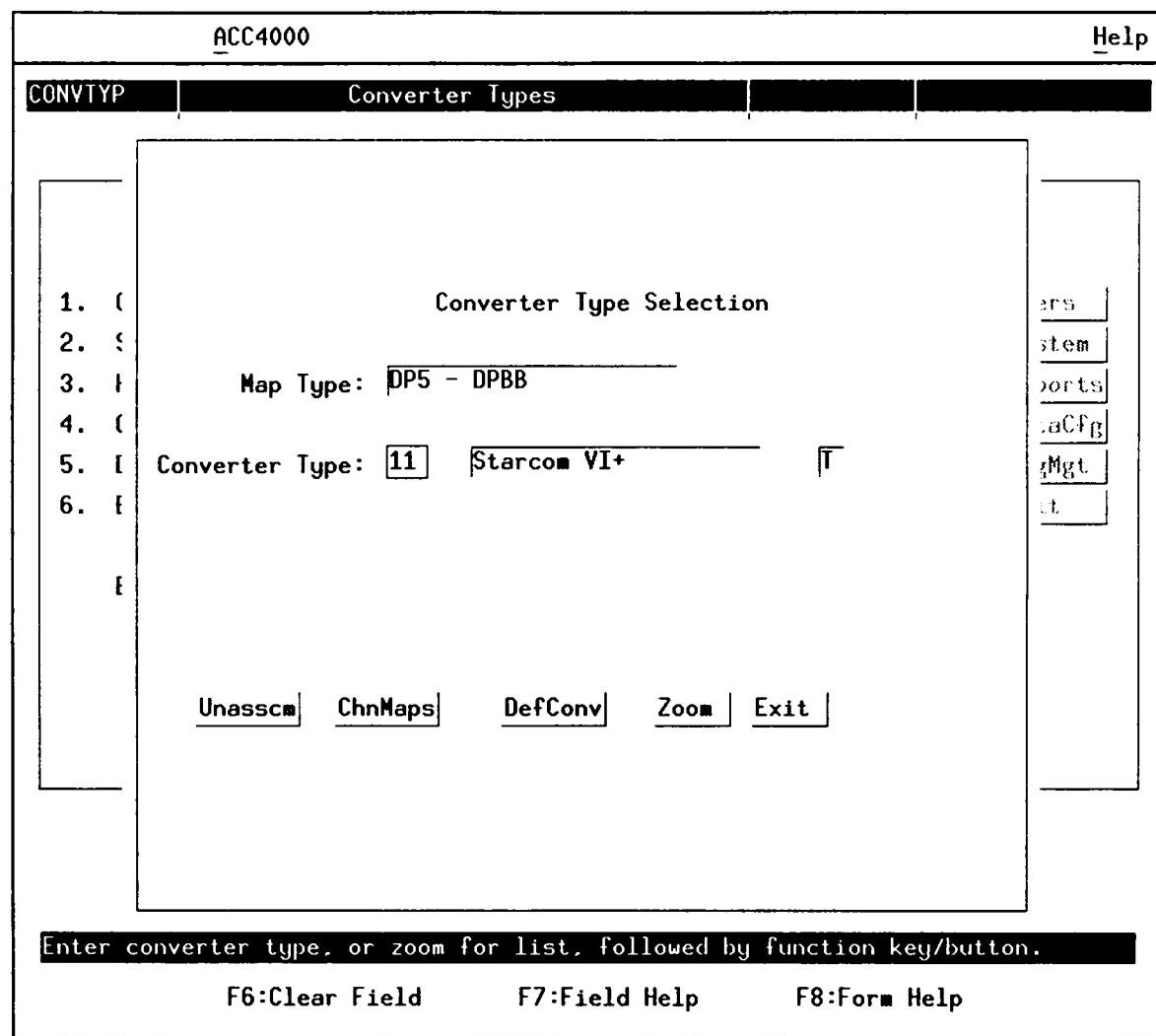
## **Channel Maps**

## **Frequency Maps**

## **Output Maps**

## **Static Maps**

## **Displaying and Modifying Converter Type Information**



*Converter Types / Converter Type Selection screen*

2. Type in the Converter Type number for the converter type you wish to display or modify, and then press the Enter key. The Map Type, Converter Type, converter description, and partition type also display. A partition type is O for one-way, T for two-way, or P for FONE-way.
3. Click on the DefConv button. The Default Converter Information screen appears. It shows all the parameters that are currently set for the type of converter you just selected.

ACC4000 Help

Default Converter Information		records found					
Converter Type:	<input type="text" value="25"/>	Hub Code:	<input type="text" value="1"/>	Activate:	<input checked="" type="checkbox"/>		
Conv Status:	<input type="checkbox"/>	Tuning Type:	<input type="checkbox"/>	Time Out:	<input type="text" value="384"/>	Channel Map:	<input type="text" value="1"/>
Amplifier:	<input type="checkbox"/>	Time Zone:	<input type="text" value="0"/>	Phone Index:	<input type="text" value="1"/>	Phone Exchg:	<input type="text" value="1"/>
Credit:	<input type="checkbox"/> 63	RF Rtrn Lvl:	<input type="checkbox"/>	M/S Status:	<input type="checkbox"/>	M/S Code:	<input type="checkbox"/>
UHF Out Channel:	<input type="checkbox"/> 1	Output-Freq Map:	<input type="text" value="1 - 1"/>	Aux 12V Opt:	<input type="checkbox"/> OFF	Emergency Alert: <input type="checkbox"/> - <input type="checkbox"/> - <input type="checkbox"/> - <input type="checkbox"/>	
Volume Control:	<input checked="" type="checkbox"/>	Last/Fav Channel:	<input type="text" value="N"/>	Time/TCP:	<input checked="" type="checkbox"/>		
Output Chan 3 :	<input checked="" type="checkbox"/>	PC Lock:	<input checked="" type="checkbox"/>	PC Morality:	<input type="checkbox"/>		
Data Test :	<input type="checkbox"/>	Purchases:	<input checked="" type="checkbox"/>	Remote Unit:	<input checked="" type="checkbox"/>		
<hr/> — SERVICES —							
<input type="checkbox"/>							
<input type="button" value="Change"/>		<input type="button" value="Zoom"/>	<input type="button" value="Accept"/>	<input type="button" value="Cancel"/>	<input type="button" value="Exit"/>		
<span style="margin-right: 20px;">F6:Clear Field</span> <span>F7:Field Help</span> <span>F8:Form Help</span>							

*Default Converter Information screen*

These are the descriptions of the fields that appear on this screen:

**Converter Type** The value in this field is a one- or two-digit integer in the range of 1 through 35. Each number corresponds to a converter type for which the ACC-4000 provides a template.

**Hub Code** The Hub Code designates a group of converters. For example, Hub Code 1 might include the converters addressed by one headend location while Hub Code 2 might include converters addressed by a second headend location. Your business system may allow you to use this code to organize the information that is sent to the converters in your system. The ACC-4000 uses the Hub Code in reports, but does not use it to control converters.

<i>Activate</i>	The value in this field is Y or N. When this value is set to Y, each converter that you add using default information will be active. That is, it is capable of performing all of its functions. When the value is N, purchases are not allowed, newer converter types go to a barker status, and any of the addressable features such as remote or parental control no longer work.
<i>Conv Status</i>	This field contains a one- or two-character value that is set by the business system. For the specific status codes for your system, see the information supplied by your business system. The ACC-4000 uses the status as a reporting feature, but does not use it to control converters.
<i>Tuning Type</i>	This field contains a one-character value: I = IRC, H = HRC, and S = STD, or standard tuning. H and S are the only valid tuning types, unless your converters are types 5 and 6. If, however, your system is IRC, and this converter type is not 5 or 6, use S.
<i>Timeout</i>	The value in this field falls in the range of 2 through 384 hours (two weeks). For one-way converters, this value represents the number of hours before a converter will turn off if it doesn't receive its packet of data from the data stream. Every time the converter sees a good reset packet, it resets the timeout value to the default that is set in this screen. For two-way and for FONE-way converters, the timeout counter starts when the first purchase is made.
<i>Channel Map</i>	The value in this field is a one- or two-digit integer representing the number of the channel map this converter type uses.
<i>Amplifier</i>	This field contains up to six alphanumeric characters. A converter can be associated, in the controller's database, with an amplifier. The amplifier value is downloaded to the ACC-4000 database by the business system. Amplifier values can be seen in two-way non-responding reports (see <i>Chapter 13, Reports</i> ).

<i>Time Zone</i>	This field contains a one-digit integer in the range of 0 (zero) through 9. It represents the hours offset from system time. For example, if there are two sites to a system, and the non-system site is located one hour east of the system site, the non-system site displays a one in this field. Each time zone to the east is an offset value of one.
<i>Phone Index</i>	This field contains a one-or two-digit integer ranging from 1 through 10. Each integer is associated with a phone number that the converter is to dial when it calls into the system. The phone numbers are stored in the fonconfig.dat file. When a FONE-way converter is initialized, the controller reads the value in this field and then sends the converter the associated phone number, which it then stores in its memory. There is a value in this field only if the converter is a FONE-way converter.
<i>Phone Exchg</i>	This field is not used.
<i>Credit</i>	This field lets you set the amount of credit allowed a converter of this type. The value in this field can represent credit in two ways: in number of purchases allowed or in dollars and cents. Whether credit is recorded in number of purchases or in dollars and cents is set in the config.dat file. If credit can be entered in dollars and cents, a dollar sign (\$) appears after the word "Credit."
<i>RF Rtrn Lvl</i>	This field contains a one- to two-digit integer, in the range of 1 through 15, representing the default RF return level. The two-way converter and the controller communicate regularly in order to find an optimal RF return level, a level high enough so that the converter can be heard, but not so high that an unacceptable noise level results. When a converter is initialized, it is set to the level found in this field. Although the level will be changed through time, you will not see a current value unless you run the SETLEVEL Utility. Running this utility puts the current return level into the database so that it can be displayed.

<i>M/S Status</i>	(Master/Slave status) The one-character value in this field can be M = Master, S = Slave, or a blank for neither. This field will have a value for converter types 21, 22, and 23.
<i>M/S Code</i>	(Master/Slave code) A one- to seven-digit integer in the range of 1 through 2097151. The value in this field represents a unique code assigned to the master and its slave or slaves, assuring that a slave can only operate when a master is present.
<i>UHF Out Channel</i>	This field contains a one- or two-digit integer representing the channel that carries UHF. This field has a value for international converters that output on channels in the UHF range.
<i>Output-Freq Map</i>	This field represents two values: the first is the output map number; the second is the frequency map number. Each is a one- or two-digit integer in the range of 1 through 99. One or both of these fields contain values when the converter is an international type.
<i>Aux 12V Option</i>	This field may have a value of either ON or OFF when the converter is an international type.
<i>Emergency Alert</i>	Emergency Alert applies only to type 5 (STARCOM 5 or XT5) converters. If these converters are a part of your system and you also need help with this option, call 1-800-537-7653.
<i>Volume Control</i>	A single alpha character field requiring an entry of Y or N, indicating whether the converter is capable of responding to a remote's volume control. This value may be downloaded from the business system.
<i>Last/Fav Channel</i>	A single alpha character field requiring an entry of Y or N, indicating whether the converter is capable of responding to a remote's last/favorite channel controls. This value may be downloaded from the business system.

<i>Time/TCP</i>	A single alpha character field requiring an entry of Y or N, indicating whether the converter is capable of responding to a remote's time control programming features. This value may be downloaded from the business system. When the value in this field is Y for IPPV converters, the converter can make pre-purchases.
<i>Output Chan 3</i>	A single alpha character field requiring an entry of Y or N, indicating whether channel three is the converter output channel. If the value is N, the output channel may be either two or four (if the converter supports this feature): with the newer converters, the number is four; with the older converters, the number may be two or four.
<i>PC Lock</i>	A single alpha character field requiring an entry of Y or N, indicating whether the converter has the parental control lock feature.
<i>PC Morality</i>	This field will have a value only for XT5 converters. If your system includes XT5 converters and you have a question about this value, call 1-800-537-7653.
<i>Data Test</i>	This field will have a value only for certain DRZ and older model converters. If your system includes these converters and you have a question about this value, call 1-800-537-7653.
<i>Purchases</i>	A single alpha character field requiring an entry of Y or N, indicating whether this converter type is authorized to make purchases.
<i>Remote Unit</i>	A single alpha character field requiring an entry of Y or N, indicating whether the converter is remote-capable.
<i>Services</i>	This converter type can be authorized with up to 32 Service Numbers at the time it is initialized. The Service Number is a unique 4-digit integer from 1 through 8191 which identifies a service such as a subscription or event. For a list of services in your system, use the zoom feature while this field is highlighted.

4. When you are finished looking at this screen, click on the Exit button.

The Converter Type Selection screen appears.

or

Click on the Change button.

5. Use the Tab key to go to any field you wish to change.

If you click on a field but it does not become highlighted, that field is not accessible for that converter type.

6. Type in the new value for the field, using the F6 key if you need to erase the contents of the field.

7. Click on the Accept button when you have finished modifying all converter type information.

The computer processes all of the information on the template. An Information Updated Successfully dialog box appears, indicating the operation was successful.

Any modified values are now used whenever this type of converter is involved in any subsequent operation.

8. Click on the Continue button. You are returned to the Default Converter Information screen.

## Displaying and Modifying Maps

Maps are modified for a variety of reasons. For example, you may want to change the associations between channels tuned and channels displayed to reflect new services your cable company will offer. Or, you may have added more channels to your system and they will need to be added to maps.

While you are modifying channel maps, you or another operator will not be able to initialize converters through the ACC-4000 screens.

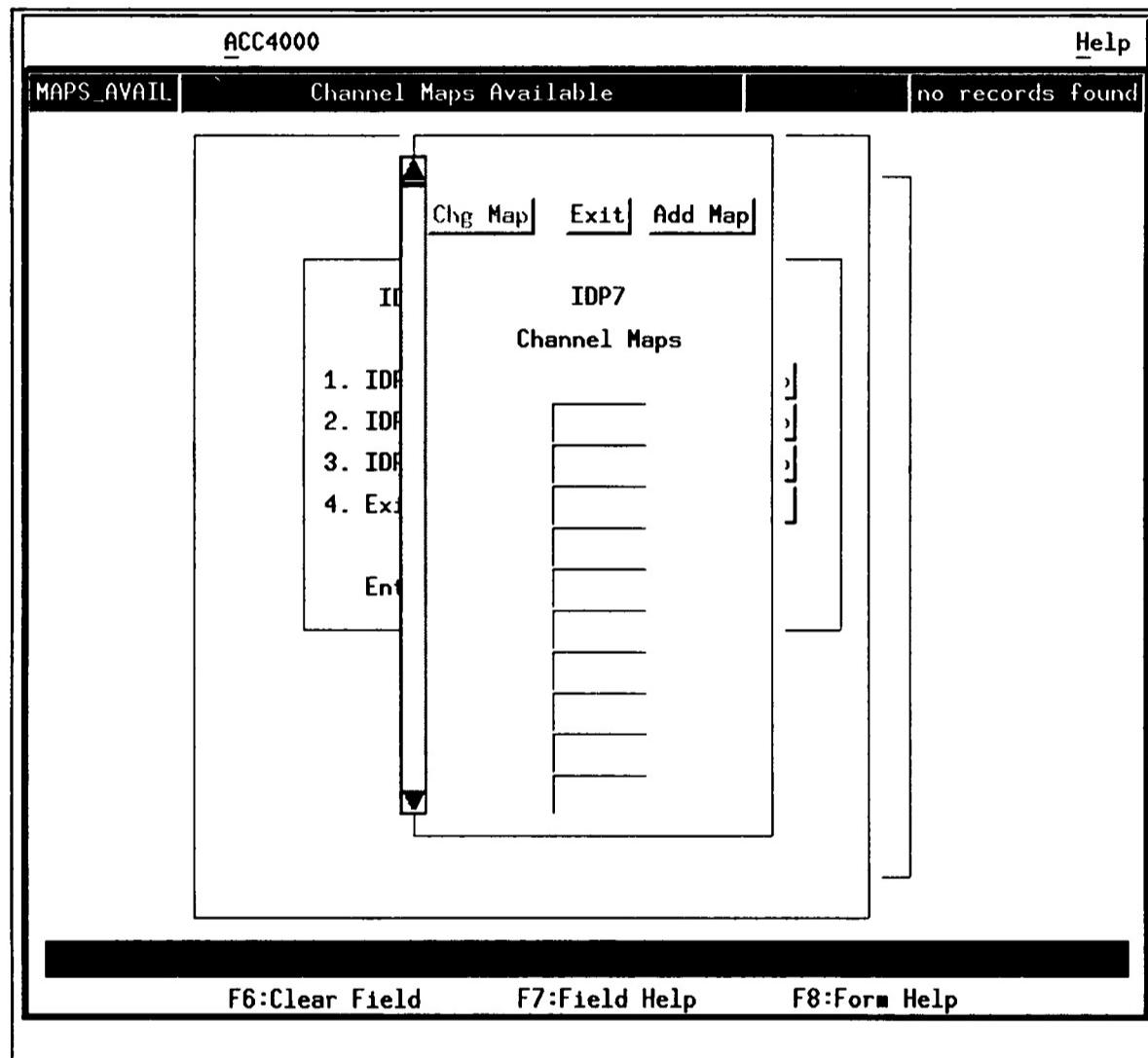
To look at or modify a map for a converter type:

1. From the Converter Type Selection screen, select a converter type and then click on the ChnMaps button.
2. If the converter type you selected has more than one type of map, which is the case with International and STARPORT maps, you will see a screen listing those types. Select a channel, output, frequency, or static map category and click on the Accept button. If the converter type you selected has only channel maps, you will see the Channel Maps Available screen.

You can modify channel maps if you have the access rights to perform this operation and if no other operator is using the Channel Maps Available screen. If the screen is in use or your privileges don't allow you to make channel map modifications, you will see a View Map button in place of the Chg Map button on the Channel Maps Available screen. When you click on the View Map button, you will be able to display channel maps, but you won't be able to change them.

### Modifying Channel Maps

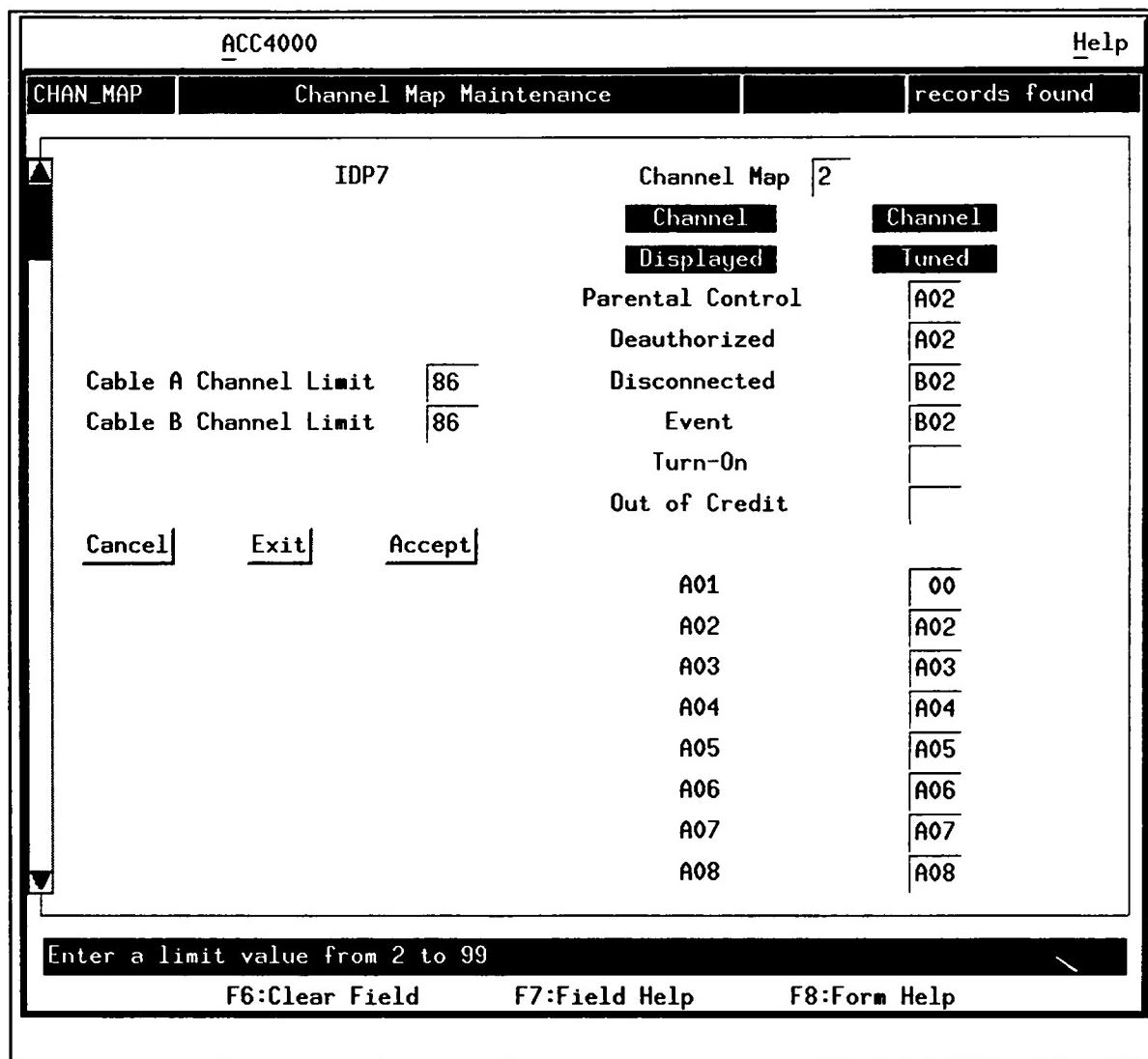
The Channel Maps Available screen displays the channel maps that are associated with the converter type you selected on the Converter Type Selection screen.



*Channel Maps Available screen*

1. Click on the Chg Map button (this will be the View Map button if you are not able to make channel map modifications) to look at or change this channel map.

The Channel Map Maintenance screen appears, displaying information about this channel map.



*Channel Map Maintenance screen*

The information in this screen can be grouped into three areas:

- Channel limits (wrap points)
- Barker conditions and tuned channel associations
- Displayed channel and tuned channel associations

#### Channel Limits (Wrap Points)

*Cable A or  
Cable B  
Channel Limit*

A three-digit integer field. Valid values are 2 through 86. The default value for this field is set in config.dat and represents the maximum number of channels that can exist on your system. If your site is configured for dual cables (A/B), your maximum tuned channel capacity for each cable is 86. You can change this value through the Channel Map Maintenance screen.

The hierarchy, from lowest to highest, for message barker or video barker (preview) channels is as follows:

- The CFT series converters can display their resident ROM barkers on detecting a barker condition. To enable a ROM barker, enter R00 (R, zero, zero) in the Channel Tuned field for the barker condition.
- Or you can map to a video barker channel to override the ROM barkers for these conditions.
- If you are using the Message Manager, its barker messages can override the channel mapped video barker channels, that in turn override converter ROM barkers. Message Manager in-band barkers override out-of-band barkers when both are present for the same barker condition. For more information, see the *Message Manager User Guide* and the *Message Editor System User Guide*.

### Barker Conditions and Tuned Channel Associations

Barker Condition	Description
<i>Parental Control</i>	<p>To enable the ROM barker for this condition, the Channel Tuned field value must be R00 (R, zero, zero). The ROM barker is:</p> <p style="text-align: center;">THIS CHANNEL IS PARENTALLY CONTROLLED</p> <p style="text-align: center;">ACCESS PARENTAL CONTROL WITH THE MENU KEY TO UNLOCK BOX</p> <p>Or to associate a video barker channel with this condition, enter a cable (A or B) preceding a two-digit integer, having a range from 1 through 99. This identifies the video barker channel that a converter tunes when a subscriber attempts to tune a channel under parental control.</p>

*Deauthorized*

To enable the ROM barker for this condition, the Channel Tuned field value must be R00 (R, zero, zero). The ROM barker is:

THIS CHANNEL IS  
NOT AUTHORIZED.

PLEASE CALL YOUR  
CABLE OPERATOR  
FOR THIS SERVICE.

Or to associate a video barker channel with this condition, enter a cable (A or B) preceding a two-digit integer, having a range from 1 through 99. This identifies the video barker channel that a converter tunes when a subscriber attempts to tune a scrambled channel that the converter is not authorized to receive.

*Disconnected*

To enable the ROM barker for this condition, the value must be R00. The ROM barker is:

YOUR CONVERTER IS  
DISCONNECTED.

PLEASE CALL YOUR  
CABLE OPERATOR.

Or to associate a video barker channel with this condition, enter a cable (A or B) preceding a two-digit integer, having a range from 1 through 99. This identifies the video barker channel that a converter tunes when it is disconnected from the ACC-4000 Controller's database (that is, its active flag is set to No).

*Event*

To enable the ROM barker for this condition, the Channel Tuned field value must be R00 (R, zero, zero). The ROM barker is:

THIS EVENT MAY  
BE PURCHASED NOW  
BY PRESSING THE  
SELECT KEY

Or to associate a video barker channel with this condition, enter a cable (A or B) preceding a two-digit integer, having a range from 1 through 99. This identifies the video barker channel that a converter tunes when the preview mode for an IPPV event expires.

*Turn-On*

To enable the ROM barker for this condition, the Channel Tuned field value must be R00 (R, zero, zero). The ROM barker is:

JERROLD  
CONSUMER FRIENDLY  
TERMINAL

Or to associate a video barker channel with this condition, enter a cable (A or B) preceding a two-digit integer, having a range from 1 through 99. This identifies the video barker channel that a converter tunes when a subscriber within his or her credit limit, or having no established credit limit, powers on the converter.

The Message Manager terminology for this barker condition is Power On.

*Out of Credit*

To enable the ROM barker for this condition, the Channel Tuned field value must be R00 (R, zero, zero). The ROM barker is:

YOUR  
PURCHASE CREDIT  
IS DEPLETED

PLEASE CALL YOUR  
CABLE OPERATOR

Or to associate a video barker channel with this condition, enter a cable (A or B) preceding a two-digit integer, having a range from 1 through 99. This identifies the video barker channel that a converter tunes when a subscriber attempts to make a purchase but is out of credit.

When associating displayed channels to tuned channels, enter three zeros in a Channel Tuned field if you want to skip that channel. For example, if you do not want to assign display channel A03 to a tuned channel, enter 000 in the Channel Tuned field that corresponds to A03.

<i>Channel Displayed</i>	A string of from one to three alphanumeric characters representing the channel the converter displays.
<i>Channel Tuned</i>	A string of from one to three alphanumeric characters representing the channel (which represents a frequency) to which the converter is tuned.

This screen lists each channel that can be tuned using the specified type of converter. If you wish to change any of the relationships between the channels displayed and tuned, perform the steps below. Otherwise, proceed directly to step 4.

2. Press the Tab key repeatedly until the cursor advances to the field you want to change.
3. Clear the field using the F6 key, and then type in a new value. Be sure to press the Enter or Tab key after each change.
4. Click on the Accept button when you are done. Then click on the Exit button to return to the Channel Maps Available screen.

You are returned to the Channel Maps Available screen.

5. To verify your entries, print out a copy of the channel map you changed (see *Chapter 13, Reports*).

The IDP7 frequency map tells the converter at what frequencies channels are transmitted over the data stream. There are 99 possible IDP7 frequency maps available on your system. When your system was installed for the first time or upgraded, a default frequency map, map number 1, was created for you. Use this default map to begin to define the frequency map you need.

The map must be presented in ascending order of tuned channel numbers. When you click on the Accept button, the system checks for ascending order. If there is an error in this order, you will see an error message.

### Displayed Channel and Tuned Channel Associations

### IDP7 Frequency Map

ACC4000

[Help](#)

IDP7_MAP	IDP7 Frequency/Output Map Maintenance	records found
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IDP7 Frequency Map 1

Cancel   Exit   Accept

Description

Channel	Starting	Spacing
Tuned	Audio	<input type="text" value="08"/>
<input type="text" value="2"/>	<input type="text" value="54"/> <input type="text" value="0"/>	<input type="text" value="08"/>
<input type="text" value="5"/>	<input type="text" value="80"/> <input type="text" value="750"/>	<input type="text" value="08"/>
<input type="text" value="8"/>	<input type="text" value="109"/> <input type="text" value="750"/>	<input type="text" value="08"/>
<input type="text" value="10"/>	<input type="text" value="278"/> <input type="text" value="0"/>	<input type="text" value="08"/>
<input type="text" value="14"/>	<input type="text" value="312"/> <input type="text" value="750"/>	<input type="text" value="08"/>
<input type="text" value="20"/>	<input type="text" value="494"/> <input type="text" value="0"/>	<input type="text" value="08"/>
<input type="text" value="23"/>	<input type="text" value="512"/> <input type="text" value="750"/>	<input type="text" value="08"/>
<input type="text" value="26"/>	<input type="text" value="541"/> <input type="text" value="750"/>	<input type="text" value="08"/>

Enter a map description up to 20 characters

F6:Clear Field   F7:Field Help   F8:Form Help

*IDP7 Frequency / Output Map Maintenance screen*

*Description*      A string of from one to twenty alphanumeric characters describing the map.

*Channel Tuned*      A one- to three-digit integer in the range of 1 through 127. See your system administrator for a list of channels that are valid for your system.

*Starting Audio Frequency*      The left side of the decimal point in this field accepts a frequency range from zero to 1023 MHz.

The right side accepts a frequency in increments of 125 kHz. The only valid entries in this portion of the starting audio frequency field are zero, 125, 250, 375, 625, 750, and 875 kHz.

*Spacing*      A one- or two-digit integer in the range of 5 to 12 MHz. The spacing field defines the number of MHz separating consecutive channels.

Frequency mapping for DCR converters allows any audio channel to be at any tunable frequency. Audio channels can be defined as:

- Stereo* One audio channel per frequency assignment
- LSR* Two low sampling rate stereo channels per audio channel
- Mono* Four low sampling rate mono channels per audio channel

When you create a DCR frequency map, you assign frequencies for both DCR and simulcast channels.

### DCR Frequency Map

DCR CHANNELS			SIMULCAST CHANNELS		
Min	Max		Min	Max	
1	64		13	49	
Channel	Frequency	Audio	Channel	Frequency	Audio
Displayed	Tuned	Format	Displayed	Tuned	Format
D01	072.4	4	S01	050.0	4
D02	073.0	4	S02	050.0	4
D03	073.6	4	S03	050.0	4
D04	074.2	4	S04	050.0	4
D05	074.8	4	S05	050.0	4
D06	093.2	4	S06	050.0	4
D07	075.4	4	S07	050.0	4
D08	089.0	4	S08	050.0	4
D09	093.8	4	S09	050.0	4
D10	089.0	4	S10	050.0	4

Enter an audio format from 0 to 7.

F6:Clear Field   F7:Field Help   F8:Form Help

DCR Frequency Map Maintenance screen

<i>Min and Max</i>	A one- to two-digit integer representing the minimum and maximum wrap points for DCR or simulcast channels. The valid range for each is 0 (zero) through 99.
<i>Channel Displayed</i>	This field indicates the channel on which the broadcast will be heard. This field is not modifiable.

*Frequency Tuned* A decimal number representing MHz. The range is from 50.0 through 800.0. Frequencies must be separated by at least 0.6 MHz, and there must be at least 0.6 MHz spacing between local radio stations and DCR frequencies.

*Audio Format* A single-digit integer ranging from 0 (zero) through 7. The audio format correlates the channel displayed with the frequency according to these formats:

- 0 = Voice channel 1
- 1 = Voice channel 2
- 2 = Voice channel 3
- 3 = Voice channel 4
- 4 = Normal stereo
- 5 = Unused
- 6 = LSR stereo channel 1
- 7 = LSR stereo channel 2

To switch from entering or modifying information for DCR to simulcast channels, click on the Switch button.

IDP7 converters that output on channels in the UHF range require an output map. The output map lets them locate the correct frequency on which to deliver their signals to the television.

### IDP7 Output Map

The output map consists of a single entry similar to each entry in the IDP7 frequency map: the Description, Channel Tuned, Starting Audio Frequency, and Spacing fields are defined in the same way.

ACC4000

**IDP7\_MAP** | **IDP7 Frequency/Output Map Maintenance** | records found

**IDP7 Output Map 1**

**Description** **OUTPUT 1**

**Channel Tuned** **Starting Audio Frequency** **Spacing**

**3** **0 125** **05**

**Unassigned Chnl**

Enter a map description up to 20 characters

F6:Clear Field F7:Field Help F8:Form Help

*IDP7 Frequency / Output Map Maintenance screen*

## STARPORT Static Map

A STARPORT static map associates a service code with each logical channel defined in the STARPORT's channel map. One static map exists for all STARPORT modules in your system. This map can contain up to 24 logical channel and service code associations.

*STARPORT Static Map Maintenance / STARPORT Static Map screen*

<i>Logical Channel</i>	A three-digit integer in the range of 001 through 128. The logical channel is the displayed channel. Each channel in this map must be defined in the STARPORT module's channel map.
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<i>Service Code</i>	The service code is a number from 1 through 256 that is associated with a subscription or event. A converter can tune to that subscription or event only if the service code is authorized for that converter.
---------------------	--

To add a channel, frequency, or output map, click on the Add Map button from the Channel Maps Available screen. The Channel Map Maintenance screen appears, formatted for the kind of map you want to add. The number in the Channel Map field will be the next channel map number that is available.

Remember that there is only one static map on your system. Therefore, there is no option to add a static map from the Channel Maps Available screen.

Unassigning a channel map from a converter type is the first step you take in order to apply a channel map's associations to another converter type.

Use this feature when you want to retain the associations in a given channel map, but want them applied to a converter type of a higher number. For example, you may have acquired a large number of new converters for your system. These converters are not the same type as the converters you currently support. Yet, you'd like the new converters to use the same channel associations so that you don't have to build another, similar map. You can unassign the channel map from the old converter type and then apply it to the new. If, however, the new converters have a lower type number than the old, you do not need to change the assignment; the existing channel map is available for every type of converter with a lower type number.

Because channel maps are backwards compatible, they must be assigned to the converter with the highest type number. If you don't know this number, ask your System Administrator.

To unassign a channel map:

1. Select the Unassign Channel Map feature by clicking on the Unasscm button.

All the maps in the system come up on the Unmap Channel Map screen that appears.

2. Click on the number of the channel map you want to unassign, and then click on the Accept button.

A dialog box appears, asking you if you want to continue. Click on the Yes button. Another dialog box appears, telling you that the operation was successful. Click on the continue button. The Unmap Channel Map screen now displays the word "UNASSIGNED" in the Current type field.

3. Return to the Converter Type Selection screen by clicking on the Cancel button.

The channel map you just unassigned is now available to be assigned to any other converter on your system.

## Adding a Map

## Unassigning a Channel Map

## Reassigning a Channel Map

Once you unassign a channel map from a particular converter type, you can assign it to another.

1. On the Converter Type Selection screen, choose the converter type to which you want to assign the unassigned channel map. Then click on the Chn Map button. The Channel Maps Available screen appears.
2. Click on the number of the channel map you want to assign, then click on the Chg Map button. A dialog box appears telling you that the map you have selected will be assigned to the type of converter you chose in the Converter Type Selection screen. Click on the Continue button.

A message appears telling you that the map is being upgraded. When the Channel Map Maintenance screen reappears, you may make changes to the newly assigned map or you may exit from the screen.

## 9 • Data Files

The ACC-4000 system provides the following utilities to help you manage your disks and files:

### Disk Management Utilities

Utility	Function
<i>System Backup</i>	Copies the ACC-4000 application to a tape.
<i>Database Backup</i>	Copies the current database to a tape.
<i>Check Disk Free Space</i>	Determines how much disk space is available.
<i>Transfer File</i>	Allows you to transfer the following files to a diskette: <ul style="list-style-type: none"><li>• Data Collection file</li><li>• Opinion Poll Information file</li><li>• Non-Responding Converter</li><li>• Information file</li><li>• Archived Purchase file</li></ul>
<i>Clear File</i>	Allows you to clear data from the following files: <ul style="list-style-type: none"><li>• Opinion Poll</li><li>• Pay Service History</li><li>• Viewership Monitor</li><li>• Auto Two-Way Poll</li><li>• Phone Non-Participating</li></ul>
<i>Restore Purchase File</i>	Restores the latest archived purchase file without having to restore the system or database backup.
<i>Output Disk Files</i>	Allows you to display the contents of a disk file on the screen or to print the file.

**Utility (cont'd)**

*Database  
Optimization*

**Function (cont'd)**

Database Optimization provides a script for scheduling or aborting the following nine database optimization functions:

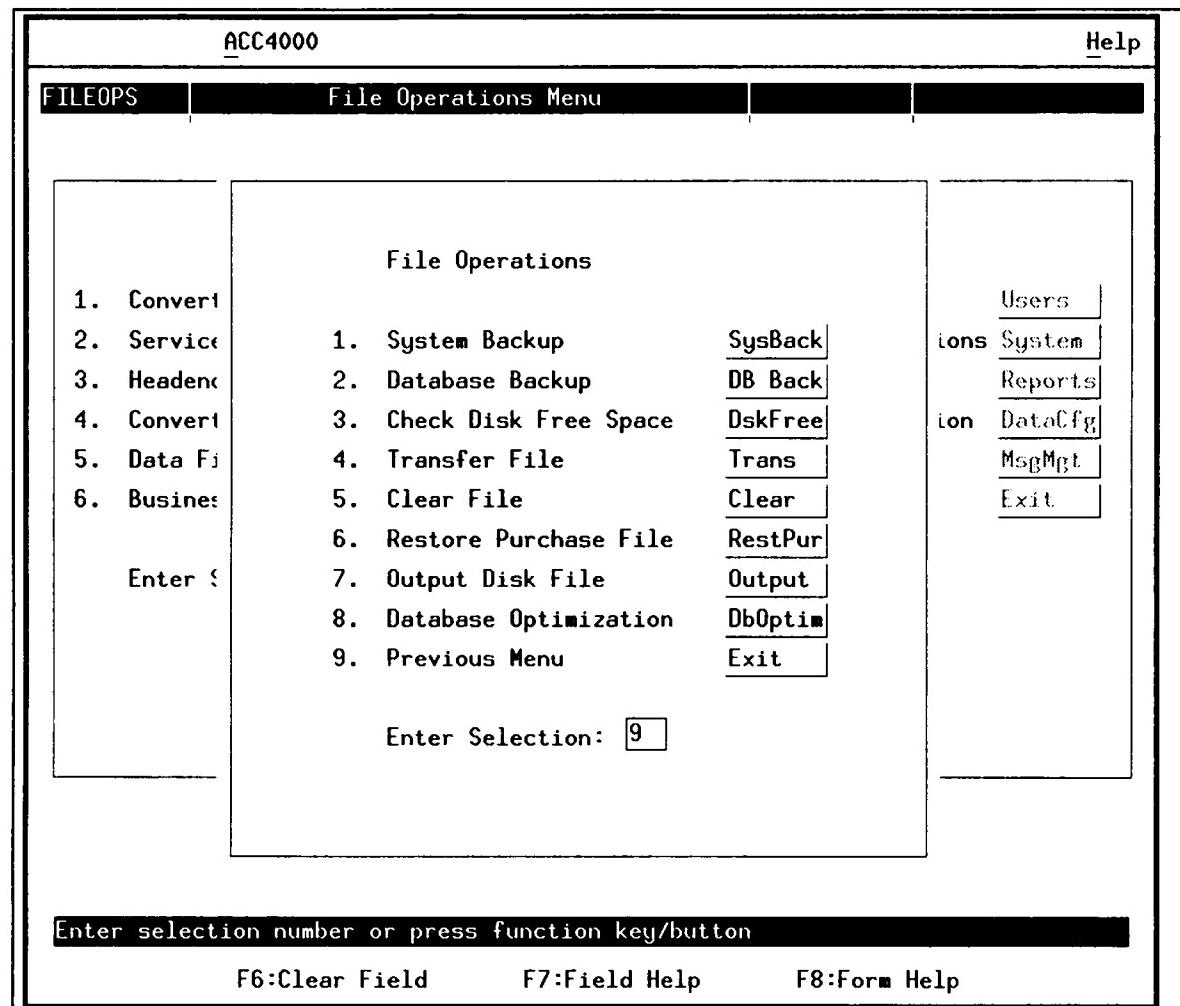
- Authorization Table Optimization
- Channel Schedule Table Optimization
- Pay Service/Pay Service History Optimization
- Purchase Optimization
- Subscriber Serial Number Index Optimization
- Complete Database Optimization (includes all the above options)
- Database Allocation Check
- Database Integrity Check

To choose a file operation option:

1. On the Main Menu, click on the Files button to select the Data Files option.

The File Operations screen appears with nine options.

### How to Choose a File Operations Option



*File Operations Menu / File Operations screen*

2. On the File Operations screen, click on the button adjacent to the name of the option you want to select.

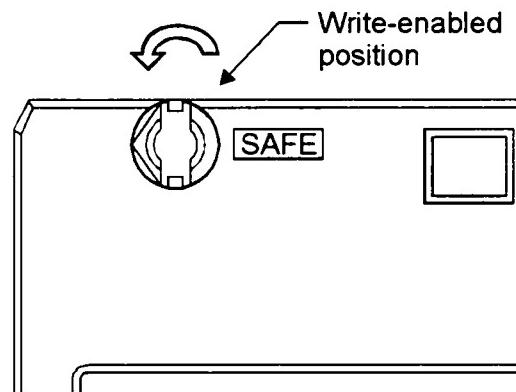
This chapter gives you instructions on how to perform the file operation options.

## System Backup

### Before You Begin

Before you begin a ACC-4000 system backup it is important to remember the following:

- Use a tape with a 525 MB capacity. This means it must be 1020 feet (189.0m) in length.
- Make the tape write-enabled by placing the dial 180° off the "safe" position as shown in the diagram below.



- Place a label on the tape that identifies the tape and prominently shows the backup date.
- Use at least three system tapes on a rotating basis.

### When Do You Back Up the System Files?

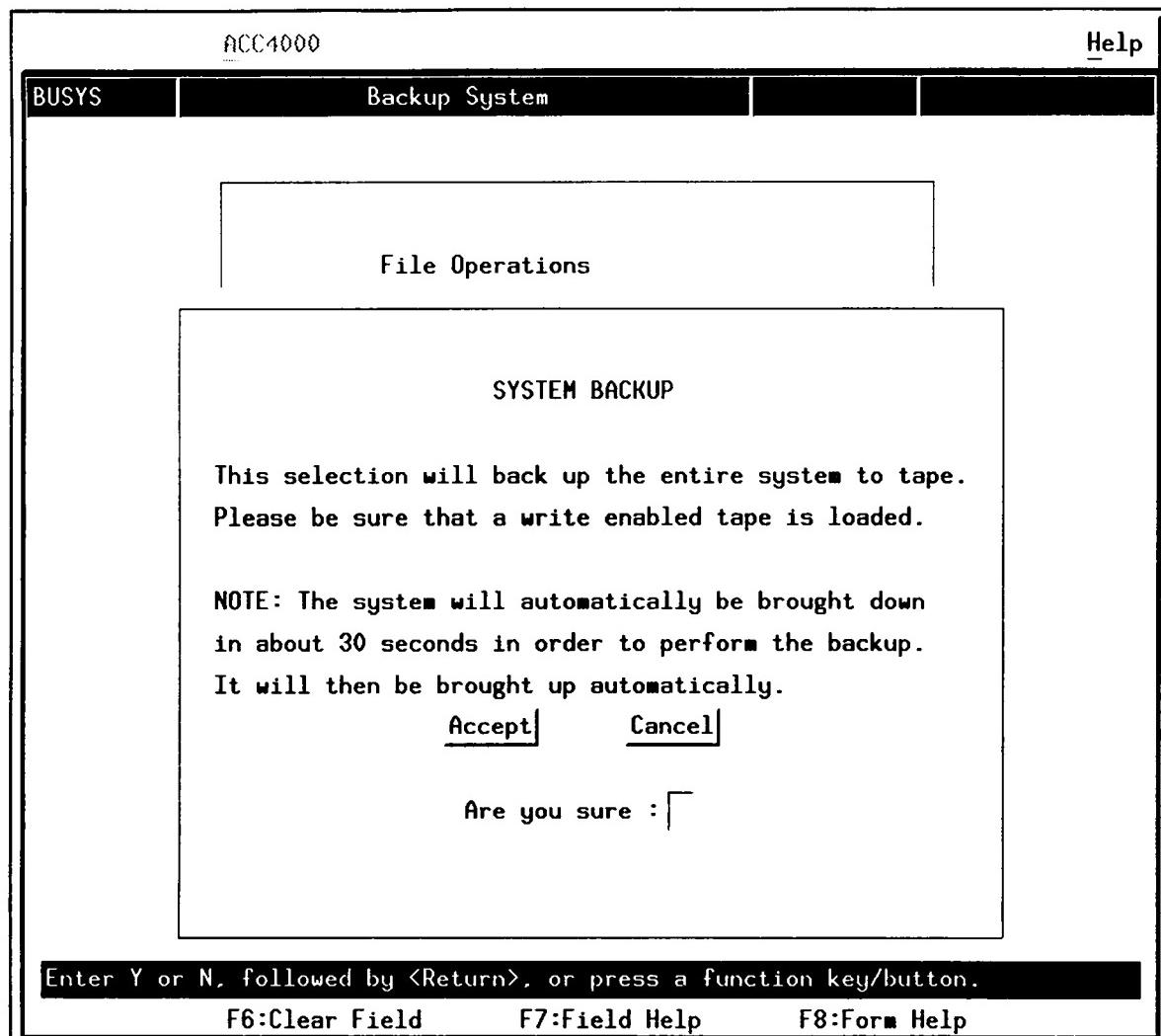
Back up the ACC-4000 application onto a magnetic tape when:

- The system software is installed
- On a monthly basis
- System changes are made by General Instrument or authorized cable company personnel

### How to Back Up the System

Use the following procedure to back up the ACC-4000 application software:

1. Select the System Backup screen by clicking on the SysBack button on the File Operations screen. A prompt asks you to confirm the system backup.



*Backup System / System Backup screen*

2. Place a 525 MB tape that is write-enabled in the tape drive. Make certain to close the drive door properly.
3. Click on the Accept button to initiate the system backup; otherwise, click on the Cancel button.
4. Enter the **super user password** at the prompt.

The ACC-4000 reboots automatically and begins to copy all the files to the tape. This process requires approximately one hour to complete. Once the system backup is completed, the ACC-4000 automatically restarts.

5. After the backup completes, remove the tape and write the date and your initials on the label. Store the tape in a cool, dry place.

## Database Backup

The ACC-4000 database is a record of the addressable controller system's configuration, status, and the details of its operations. Because you can't afford to lose this information you should perform daily backups.

### Before You Begin

To facilitate the database backup:

- Purchase seven tapes, one for each day of the week. Use tapes with 525 MB capacity. This means that the tapes must be 1020 feet (189.0m) in length.
- Identify each of these with a label that prominently shows the day the tape is loaded and the day it is run. For example, the Tuesday tape is run Wednesday morning.
- Remove and label this tape each morning and insert the appropriate tape for the next day.

### When Do You Back up the Database?

General Instrument strongly recommends that the ACC-4000 database be backed up onto magnetic tape every day (seven days a week).

The default system configuration automatically backs up the database and system configuration files every day at 1:00 AM, provided that there is a tape in the tape drive. If 1:00 AM is not a convenient time for your system, call 1-800-537-7653 to schedule a new time.

The database is backed up on both a tape and a hard disk. The database resides on disk number two of the ACC-4000 controller's three disk system. The database backup sequence is:

1. Disk number two backs up to disk number three.
2. Disk number three backs up to the tape.

If you need to do a database restore, you need the database backup tape. Call the 1-800-537-7653 for assistance before attempting to restore the database.

You receive an error message under the following conditions:

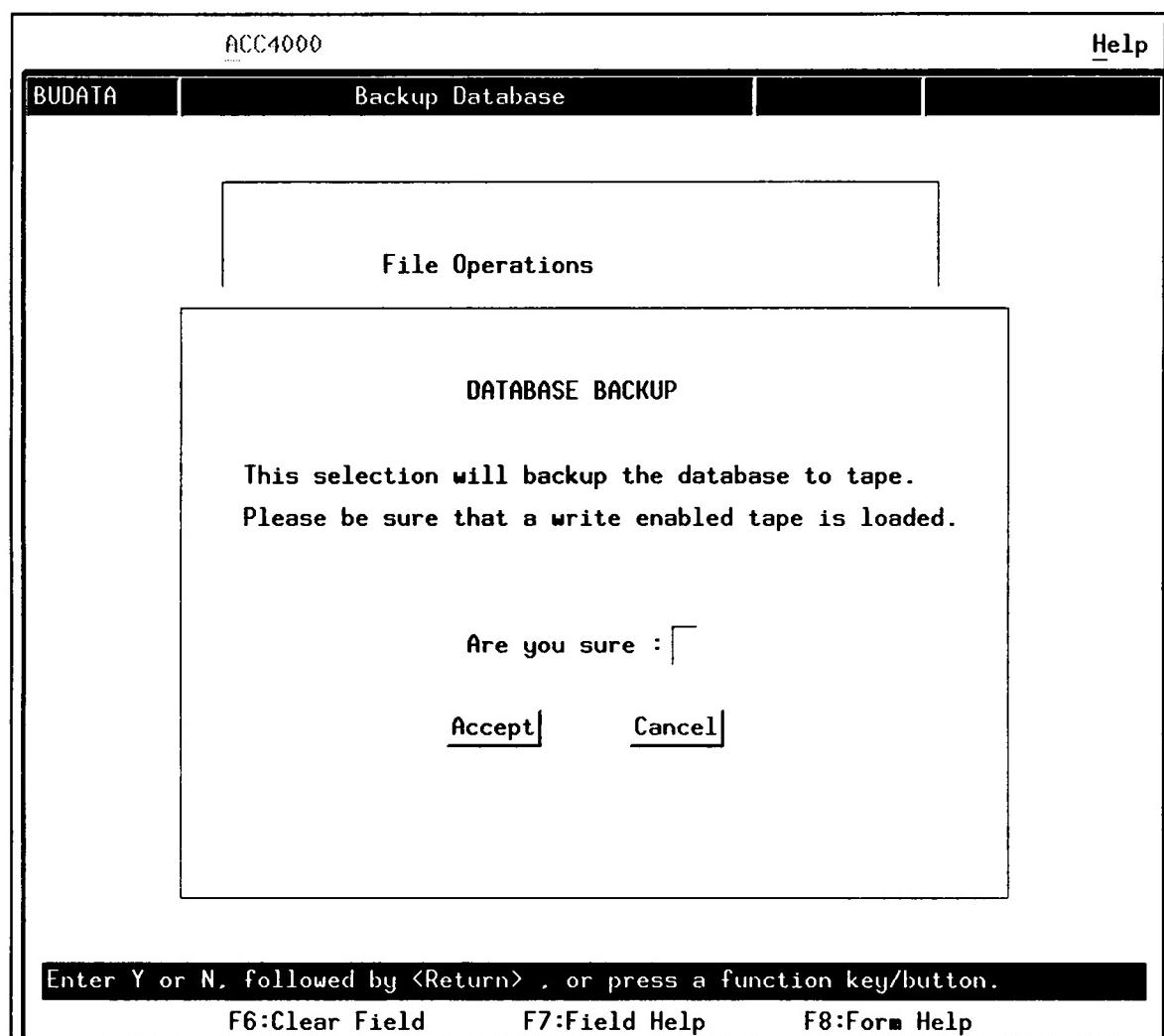
- A tape is not in the tape drive
- Two or more hours elapse before the back up completes
- Keywords are not received at the end of the back up
- The disk-to-disk back up fails

### How to Do Manual Database Backup

In addition to the daily automatic backup, the ACC-4000 allows the you to manually initiate a backup of the database at any time. Because the database backup does not interrupt ACC-4000 system activity, you can use the system while the database is being backed up.

To initiate a manual backup of the ACC-4000 database:

1. Select the DB Back button on the File Operations screen to display the Database Backup screen. The prompt asks you to confirm that you wish to back up the ACC-4000 database.



*Backup Database / Database Backup screen*

2. Place the appropriate tape in the tape drive. Make certain the drive door is properly closed.
3. Click on the Accept button to initiate the ACC-4000 database files; otherwise, click on the Cancel button.
4. The ACC-4000 now begins and the process requires 30 to 40 minutes to complete.
5. Once the backup completes, the File Operations screen reappears.
6. After the backup completes, remove the tape and write the date and your initials on the label. Store the tape in a cool, dry place.

## Checking Disk Space

### When Do You Check Your Disk Space?

The Check Disk Space feature allows you to see at a glance the available and unavailable hard disk space.

Check your disk space on all three hard disks weekly to determine how much hard disk space the ACC-4000 system and its database occupy, and how much space remains free for use. Your disk space may fill up because of:

- Duplicate files generated during routine maintenance
- Reports files generated but not deleted from the disk
- Logger files retained on the disk

If any disk shows 90% or more usage, you must delete all unnecessary and redundant files to ensure continued proper system operation. If you need assistance, call 1-800-537-7653.

### How to Use the Space Checking Procedure

To use the Check Disk Space feature:

1. Click on the DskFree button to select the Check Disk Free Space option on the File Operations screen.

A shell screen appears near the top of the screen and provides information about the hard disk in six different columns:

<i>Mount Dir</i>	Indicates each primary directory used by the system on the hard disk, for example /usr.
<i>Filesystem</i>	Lists sub directories within each primary directory, for example /dev/dsk/0s1.
<i>Blocks</i>	Total number of blocks (a block = 512 bytes) allocated to that directory.
<i>Used</i>	Number of blocks currently used.
<i>Free</i>	Number of blocks not used or "free" to use.
<i>% used</i>	Percentage of blocks currently in use.

2. Make sure that the value in the % used field on each of the disks does not exceed 90%. Press the Enter key to return to the File Operations screen.

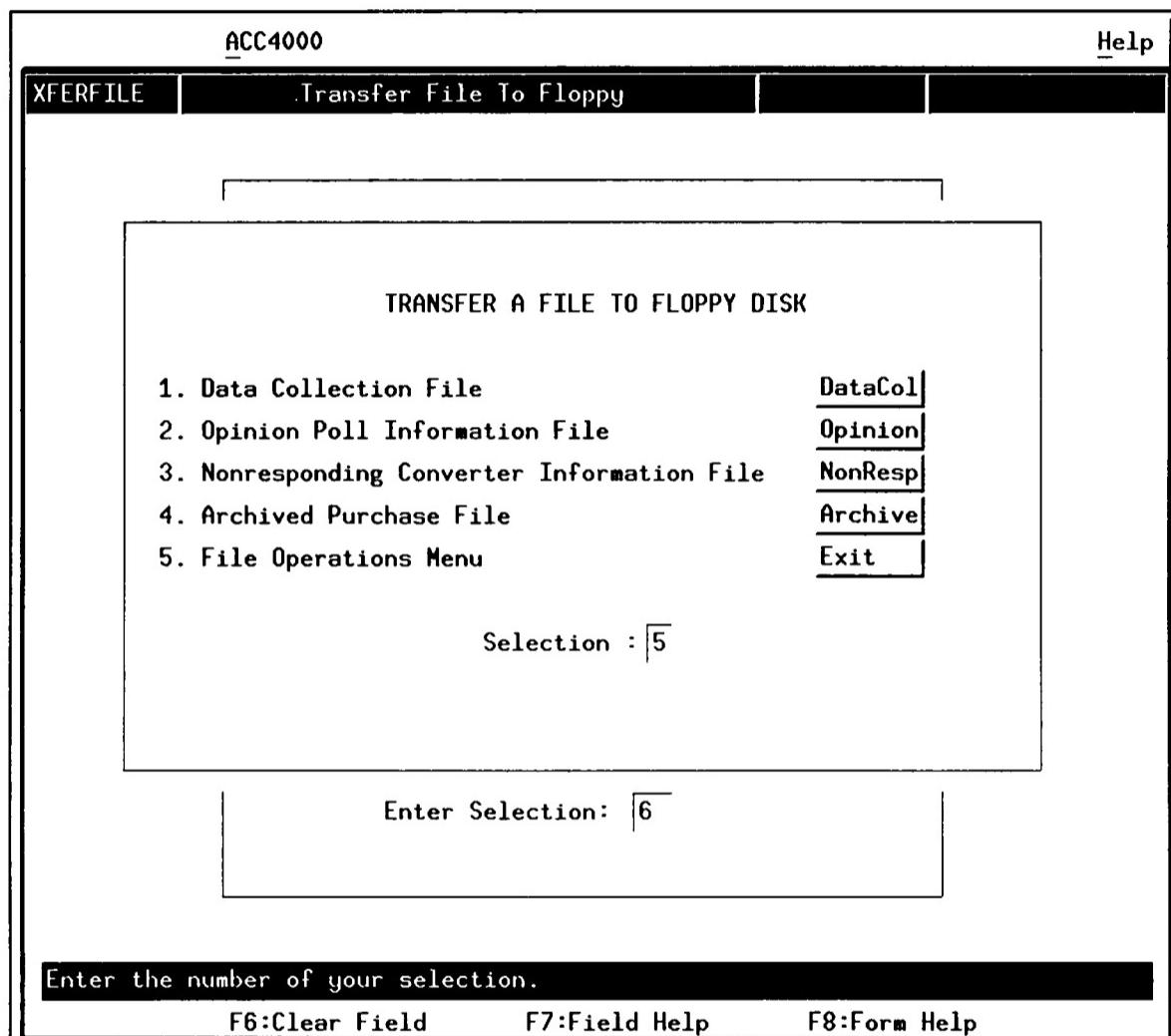
This function allows you to copy one of the four files listed on the screen below from the ACC-4000 to a diskette. You can upload these files to the billing system, use information for data analysis, or store the disks as an archive.

To transfer files on the ACC-4000, follow the procedure below:

1. Click on the Trans button on the File Operations screen to select and display the Transfer a File to Floppy Disk screen.

## Transferring Files

### How to Use the Transfer File Procedure



*Transfer File to Floppy / Transfer a File to Floppy Disk screen*

2. Select the file to be copied by clicking on the appropriate button.

If you select the Data Collection File, a prompt asks you to enter the number of file copies. Typically, you use the default value of 1.

If you select the Archived Purchase File, a prompt asks you for the starting and ending archived dates. The default is to archive all purchases.

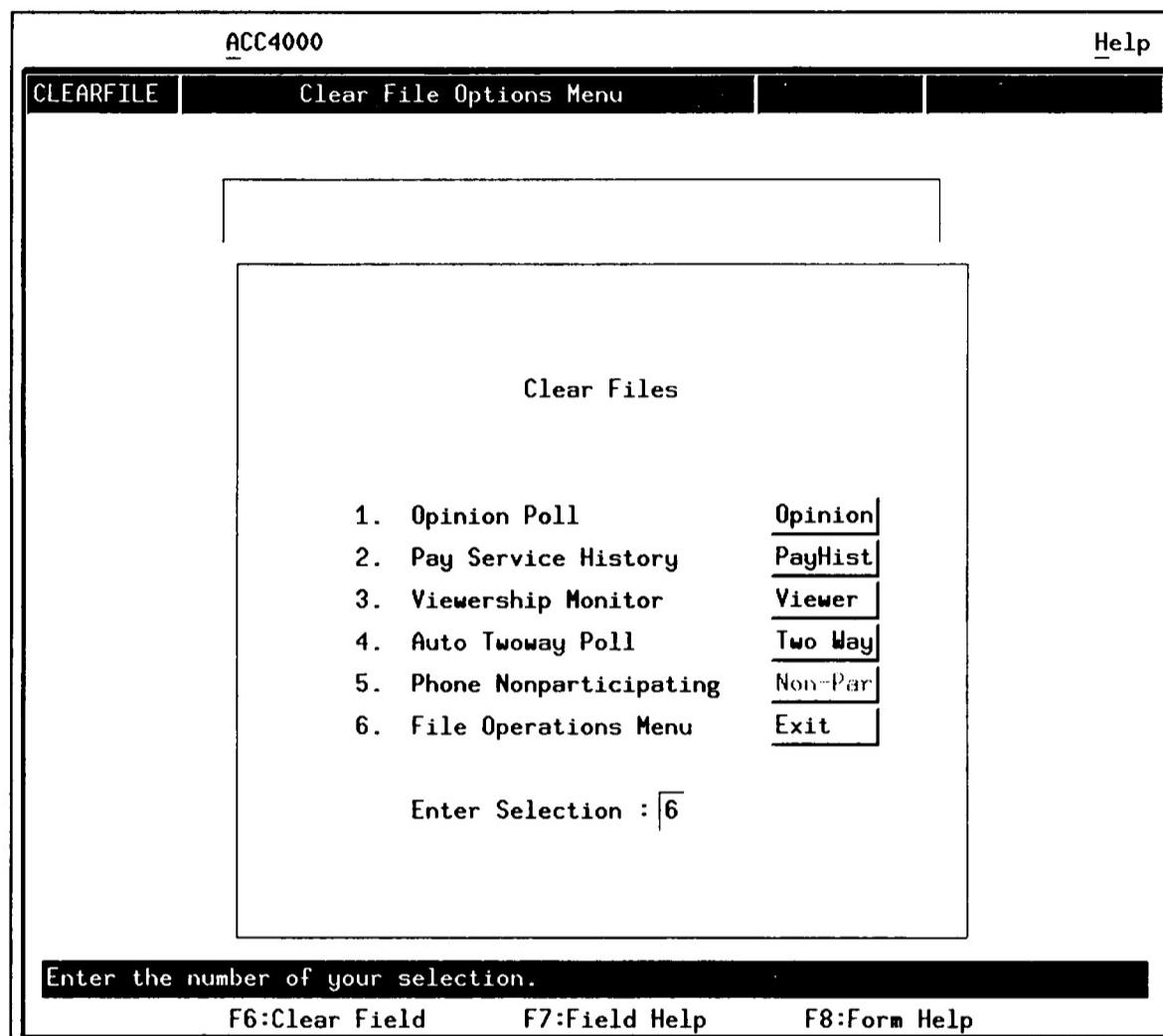
Enter all dates using the MM/DD/YY format, for example, 01/05/94 for January 5, 1994.

3. Place the diskette in drive **B**. Make certain the drive door is properly closed.
4. If you selected the Archived Purchase File option, a prompt asks you to press the Enter key to begin the transfer to the disk in the **B** drive. When the transfer is complete, the File Operations screen reappears.
5. After the transfer completes remove the diskette from the drive and write the date and your initials on the label. Store the diskette in a cool, dry place.

Do not leave a diskette in a disk drive because this may prevent the ACC-4000 from rebooting after a power failure.

The Clear Files feature allows you to remove data from the files listed on the screen below. The Clear Files function is flexible and allows you to delete information by date, except for the Phone Non-Participating File. This ensures that current data is retained in these files. Because you don't want to delete pertinent information, check with your System Administrator before clearing any file.

## Clearing Files



*Clear Files Options Menu / Clear Files screen*

### *Opinion Poll*

Clear the file monthly or when you begin a new polling sequence.

### **When Do You Clear a File?**

### *Pay Service History*

If your pay service history function is not automated, manually clear the file. Retain two months history for a one-way site and more than two months for a two-way or FONE-way site. This information is used to determine what pay service information was purchased by two-way or FONE-way converters.

<i>Viewership Monitor</i>	Clear the file monthly or when you begin a new polling sequence.
<i>Auto Two-Way Poll</i>	The file keeps the number of polls, usually ten, specified in the configuration file. If you change your system configuration or operation, clear the file to collect new polls.
<i>Phone Non-Participating</i>	After you determine your chronic non-participating converters and print the report listing the converters, clear the file and begin collecting new data.

#### **How to Use the Clearing Files Procedure**

Use the same procedure to clear all five files:

1. Click on the Clear button on the File Operations screen to select and display the Clear File screen.
  2. Click on the button representing the file to be cleared.
- The Clear Opinion Poll File screen displays over the center of the screen allowing you to specify a date and confirm the command.
3. Enter all dates in the MM/DD/YY format, for example, 01/05/94 for January 5, 1994.

The system clears all information in the file dated before the indicated date. The database retains all information after the specified date. If no date is entered, today's date is automatically used and the system deletes all information in the file.

The date entry does not apply to the Phone Non-Participating File. The system deletes all information from this file.

4. Click on the Accept button to confirm that you want to clear the file.

After you confirm the clear command, the system returns you to the File Operations screen.

The ACC-4000 system allows you to restore the latest purchase file without having to restore the complete system or database backup. The restore process unarchives the file for the ACC-4000 system to use during normal operations. You can upload the unarchived purchase file to the billing system.

The ACC-4000 retains the last ten archived files. The system archives the files in numerical order, not by date. Usually you archive files on a daily basis, so the last ten files correspond to the last ten days of purchases. However, the archive procedure depends on your company's business policy.

You must restore the last ten archived purchase files in first in, first out order. For example, you can not select the file number three in the ten file stack and restore that specific file. In order to restore file number three, you must restore files one, two, and three in sequence.

Use the following procedure to restore data in the Purchase file:

1. Click on the RestPur button on the File Operations screen to select and display the Restore Purchase File screen.

The system displays the date of the most recently archived file. After you restore the first file, the system displays the date of the next file in the ten file stack.

2. Click on the Accept button to restore the specified archive file.

## Restoring Purchase Files

### How to Use the Purchase Restoration Procedure

## Output Disk Files

### How to Use the Output Procedure

The purpose of the Output Disk File is to copy an existing disk file to your screen or the printer. Use this feature to review the contents of a file on the screen or in hard copy.

To output a file to the printer or have it displayed on the screen simply:

1. Click on the Output button on the File Operations screen to select and display the Output DiskFile screen.
2. Type the name of the output file.

Remember that UNIX is case-sensitive. If you type in the lower case for a name that is in the upper case, you receive an error message!

3. Click on either the Screen or the Printer button.
4. If you send the output to the printer, enter the number of copies to be printed.
5. Click on the Accept button.

The file goes to the selected device.

*Printing*      If the file goes to the printer, you return to the File Operations screen while the file prints.

*On-Screen File*      The file appears in a shell screen. After scrolling through the file, press the Enter key as many times as necessary to return to the File Operations screen.

Periodic optimization of the database ensures that the database file structure is compact and orderly. This can improve your system response time.

Before you begin a database optimization make certain that you:

- Do a database backup
- Disconnect the wirelink. One way to do this is to set the Business System Gateway status to inactive on the Business System Gateway Main Menu

You should selectively optimize your database according to schedule established by your System Administrator. For instance, many sites optimize their Authorization Table (option 1) once a week and do the complete Database Optimization (option 7) once a quarter. General Instrument periodically issues documents called *Tech Tips* to keep your System Administrator advised of recommendations on important and dynamic subjects such as this.

Use the following procedure to run the database optimization function on the ACC-4000:

1. After you select the DbOptim button on the File Operations screen, the system displays the following ACC-4000 Database Optimization Script.

```
*****
*          ACC-4000 Database Optimization Script
*
* Opt  Description                      Approx. Minutes
*
* 1 - Schedule/abort Authorization Table Optimization    10
* 2 - Schedule/abort Channel Schedule Table Optimization  01
* 3 - Schedule/abort Pay Service/Pay Service History Optimization  01
* 4 - Schedule/abort Purchases Optimization            01
* 5 - Schedule/abort Subscriber Serial Number Index Optimization  50
* 6 - Schedule/abort Subscriber Account Number Index Optimization  50
* 7 - Schedule/abort Complete Database Optimization (items 1-6) 120
* 8 - Schedule/abort Database Allocation Check        20
* 9 - Schedule/abort Database Integrity Check         100
* 10 - Exit
*****
Enter Option ==> ■
```

2. Enter the number of the optimization operation you want to perform. The prompt asks you to enter the time you want that optimization to run. Select a time that doesn't conflict with your other scheduled activities (for example, backups, data collection, or PSL). You may also enter **now** as the time. In fact, General Instrument recommends that you use the **now** option so that you can be there to turn the wirelink off and back on.
3. Whether you run it now or schedule it for some time in the future, you must remember to check the logger window for any optimization messages. When the optimization is complete you can activate the wirelink.

## Database Optimization

### Before You Begin

### When Do You Do a Database Optimization?

### How To Do a Database Optimization



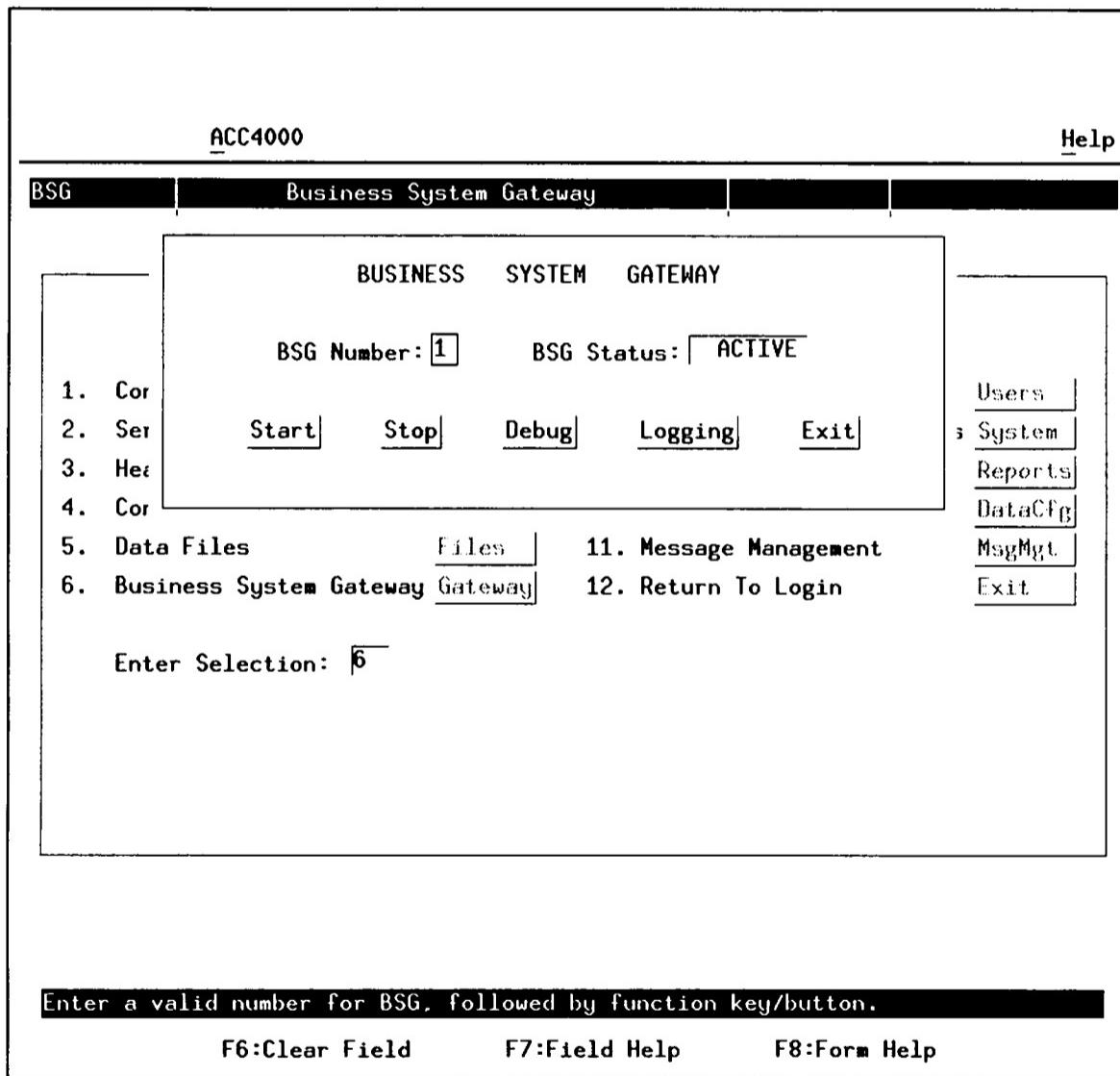
## 10 • Business System Gateway

The ACC-4000 system lets you control its interface, through a Business System Gateway (a wire link), with the Business System (also called the billing system). Your system can have up to five Business System Gateways. You can control the:

- On/off state
- Debug options
- Logging options

### Introduction

From the Main Menu, click on the Gateway button to select the Business System Gateway option. The Business System Gateway screen appears.



*Business System Gateway screen*

## Starting the Business System Gateway

This operation lets you start a Business System Gateway. If you try to start a Business System Gateway and have no pay services, the system shuts down.

1. From the Business System Gateway screen, enter a Business System Gateway Number as a one-digit integer.
2. Pressing the Enter or Tab key displays the active or inactive status of your selected Business System Gateway.
3. The ACC-4000 sends a start command to the designated Business System Gateway when you click on the Start button. A message appears, indicating that one of three conditions:
  - The Business System Gateway was successfully started
  - The Business System Gateway was already running
  - The ACC-4000 was not configured to run that Business System Gateway

## Stopping the Business System Gateway

This operation lets you stop a current Business System Gateway.

1. From the Business System Gateway screen, enter a Business System Gateway Number as a one-digit integer.
2. Pressing the Enter or Tab key displays the active or inactive status of your selected Business System Gateway.
3. The ACC-4000 sends a stop command to the designated Business System Gateway when you click on the Stop button. A message appears, indicating that the Business System Gateway was successfully stopped or that it was already stopped.

## Logging

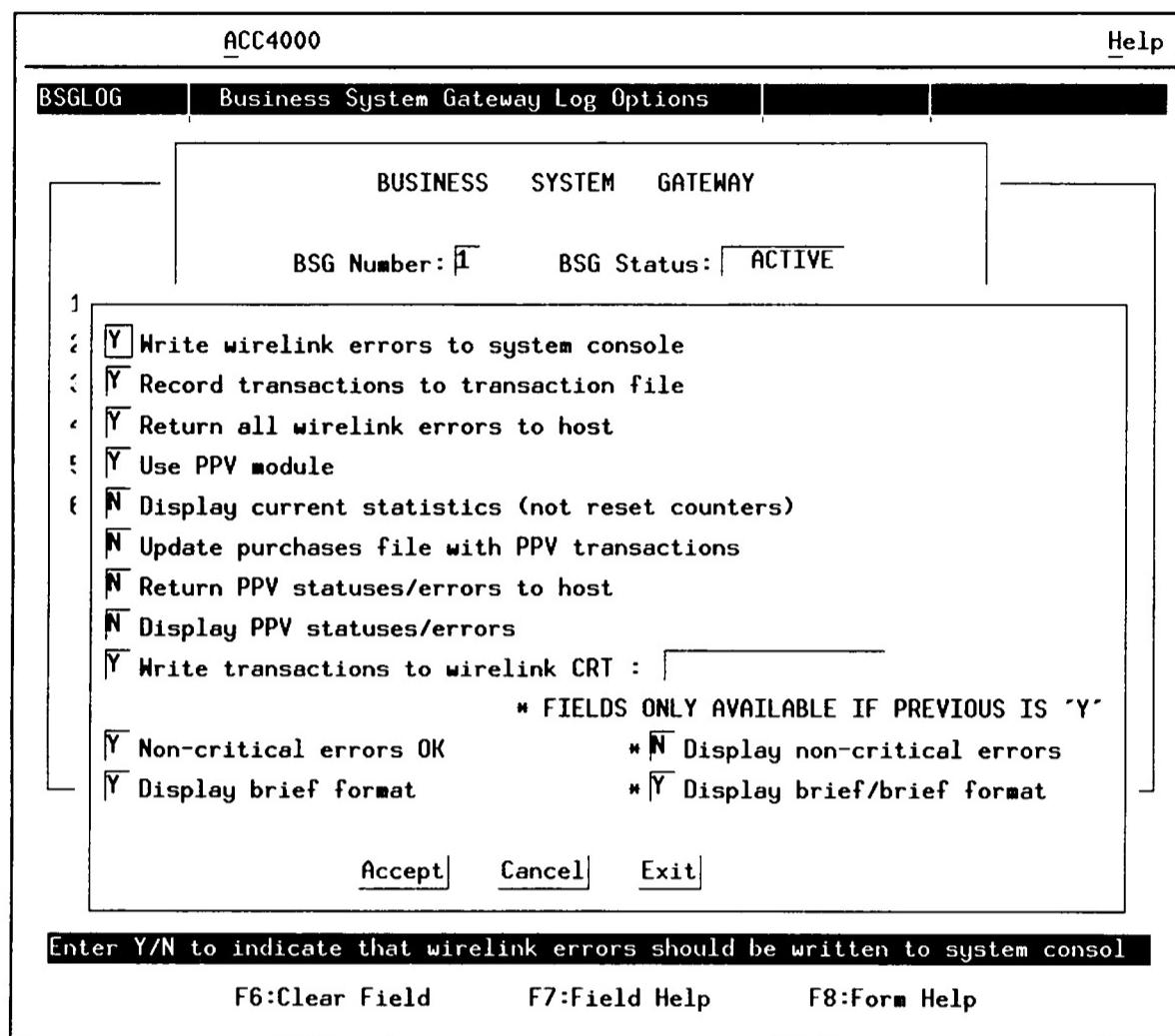
This option lets you customize Business System Gateway parameters during real-time operations. Some of these are used primarily for trouble-shooting and deal with:

- Where the data is to be displayed
- What errors should be ignored
- Printing the current statistics

**Because selecting this option can substantially affect the wire link's performance, we recommend that you use it only under the direction of General Instrument personnel.**

1. Enter a Business System Gateway Number as a one-digit integer.
2. Pressing the Enter or Tab key displays the active or inactive status of your selected Business System Gateway.

3. Clicking on the Logging button displays the Business System Gateway Log Options screen.



*Business System Gateway Log Options screen*

4. Press the Enter or Tab key until reaching the first field that you want to change.
5. Press the F6 key to clear the field, then type a Y for Yes or N for No.
6. Repeat steps 4 and 5 for every field that you want to change.
7. Click on the Accept button after making all desired changes.

This option should only be used by General Instrument personnel. For debugging assistance, please call our Technical Response Center at 1-800-537-7653.

**Debug**



## 11 • User Information

A cable company usually has a number of people who, at least periodically, work on the ACC-4000 Controller. Their tasks will vary, depending upon job responsibility, and knowledge of and experience with the system. The ACC-4000 provides a flexible user access scheme that allows the System Administrator to tailor the access rights to your business requirements and the needs of each user. The ACC-4000 allows the System Administrator to:

- Define user classes
- Assign a unique set of object access rights to each user class
- Select all or a subset of the operations associated with each object and assign user class access rights to the operations
- Assign user name, password, and class name to each person authorized to use the system
- Manage the ACC-4000 access rights by adding, modifying, and deleting user classes and individual users

The System Administrator defines the ACC-4000 user classes. Each user class is assigned the set of access rights to the ACC-4000 system functions necessary to allow the members of that user class to perform their job. The System Administrator assigns you to a user class. This assignment gives you the access rights assigned to that class.

The ACC-4000 groups the system functions you perform into 11 groups, called objects. These correspond to the 11 options provided by the Main Menu. The System Administrator grants the access right for each object to each user class on an individual basis. The objects categories are:

Converters	Message Management
Data Files	Control System
Business Gateway System	Users Classes
Reports	Services/Schedules
Headend Equipment	Data Path Configuration
Converter Types	

### Who Has Access to the System?

### User Classes

### Objects

## Associated Operations

Each object has a list of the associated operations required to carry out the object's day-to-day tasks. After assigning a user class the access rights to an object, the System Administrator assigns the access right to each operation within the object on an individual basis.

As an example of the associated operations, the operations within the Converter object are:

Add Converter	Clear Control Keys
Change Converter	Quality Control
Initialize Converter	Send Global Punches
Display Converter	Read Authorizations
Test Converter	Read Purchases
Delete Converter	Data Collection
Polls	Change RF Level
Response Calls	Isolate Babblers
Authorize/Deauthorize	

## Default User Classes

The System Administrator can and may have modified these existing classes to meet your system's requirements. The default user classes and the access rights assigned to each are:

User Class	Access Rights for Objects	Access Rights for Operations Defined for Object
<i>Supervisor</i>	All objects	All operations
<i>Operator</i>	All objects except user classes	All operations except those defined for user classes and the Edit Configuration Files operation in the Control System object
<i>Factory</i>	All objects except user classes	All operations except those defined for users classes and the Edit Configuration Files operation in the Control System object
<i>Dispatcher</i>	Access rights for converters only	Access to the subset of converter operations required to test and initialize converters

See your System Administrator for information about your user class assignment and object/operation access rights.

## 12 • Control and Configuration Utilities

The ACC-4000 contains many specialized utilities to help you keep your system operating at an optimum level. You access some of the utilities through the Data Files selection on the Main Menu (see *Chapter 9, Data Files*), and the others are found in this section. All of the utilities listed in the Data Path Configuration option on the Main Menu are for use by General Instrument personnel.

Many routines available through the Control System Options Screen can alter the system performance levels, resulting in either increased or decreased efficiency. Some of the routines are primarily diagnostic, pinpointing problem areas within the system. Still other routines affect the database directly, making sweeping changes as well as fine-tuning individual items.

Because most of these routines can make profound changes to your database and to your system, they are used by your System Administrator with assistance from General Instrument or by General Instrument personnel to perform maintenance and diagnostic functions. A few control system functions are useful in maintaining your system on a day-to-day basis.

Please confer with your System Administrator for instructions before attempting to run any of the Control System Functions designated for your use.

If you have already entered a restricted routine's shell window and are trying to exit, press Ctrl + Z or Ctrl + C. If you need additional guidance to exit, call 1-800-537-7653.

Use the following control system functions to assist you in your regular ACC-4000 operations:

- On the Control System Utilities Options Screen use:
  - SETLEVEL Utility
  - XREFUTIL Utility
  - PUNCHUTIL Utility
  - DCR AUDIO Key Editor
- On the Administrator Control Options Screen use:
  - System Shutdown
  - System Reboot
- System Date and Time
- Daylight Savings Time

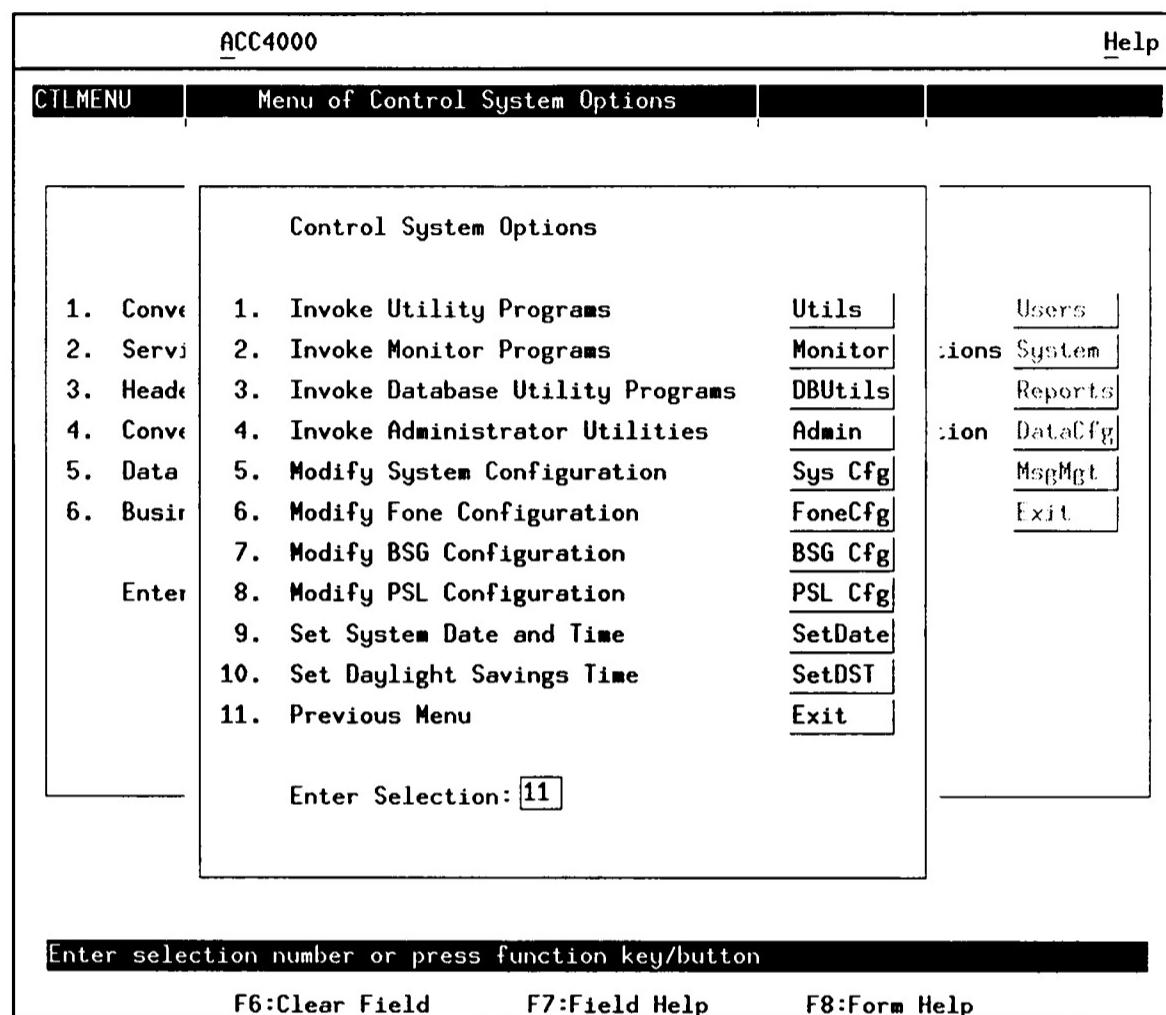
### Introduction

### What Routines Do You Use?

## How to Choose a Control System Functions Option

To choose a control system function option:

1. On the Main Menu, click on the System button to select the Control Systems Options. This screen appears with ten control options.



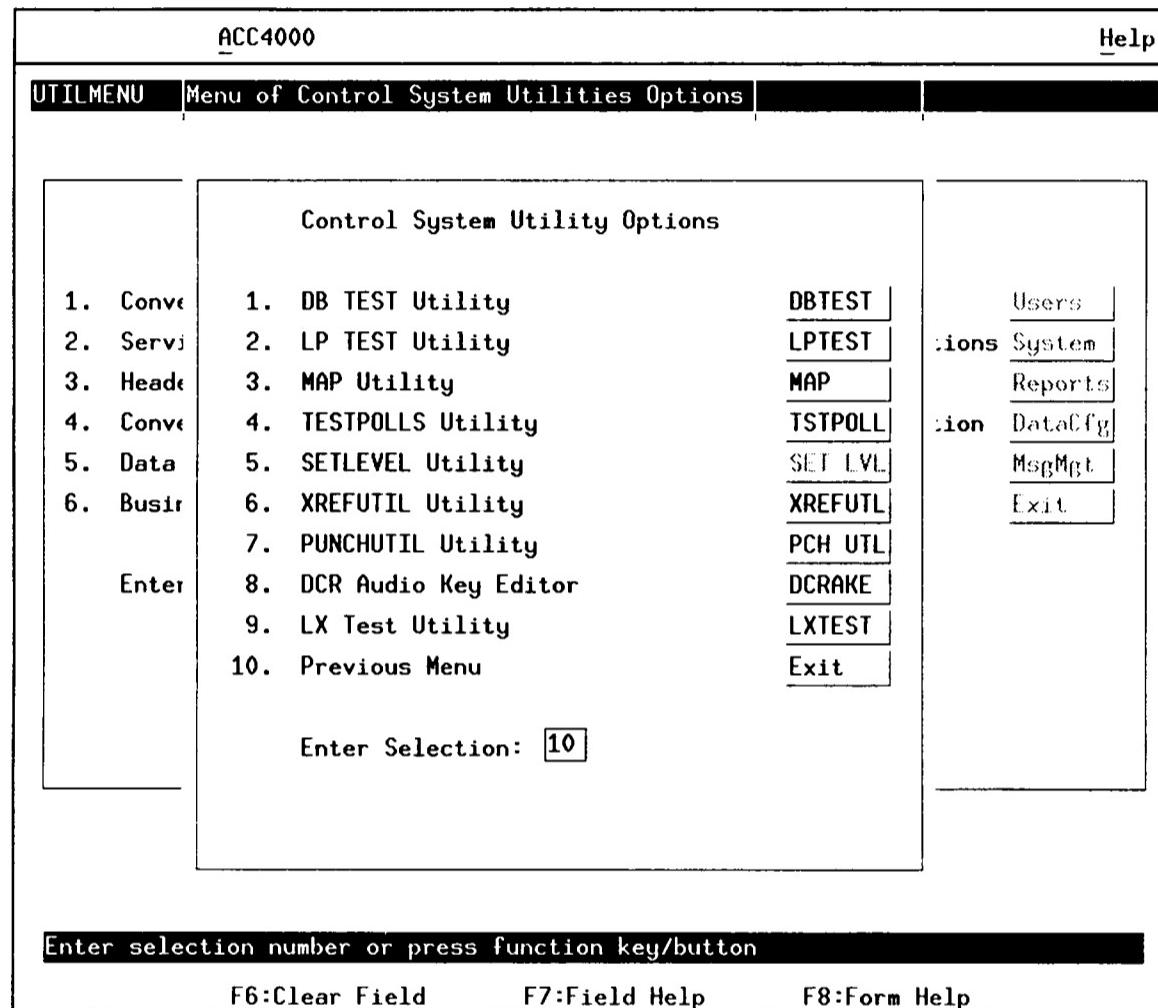
*Menu of Control System Options / Control System Options screen*

2. On the Control Systems Options Screen, click on the button adjacent to the name of the option you want to select. See the appropriate section in this chapter for information concerning the function you selected.

To choose a Utility Program option:

### How to Choose a Utility Program Option

1. On the Control System Options screen, click on the Utils button to select the Invoke Utility Programs option. The Control System Utility Options screen appears with ten options. The SETLEVEL, XREFUTIL, PUNCHUTIL, and DCR Audio Key Editor may be available for your use.



*Menu of Control System Utilities Options / Control System Utility screen*

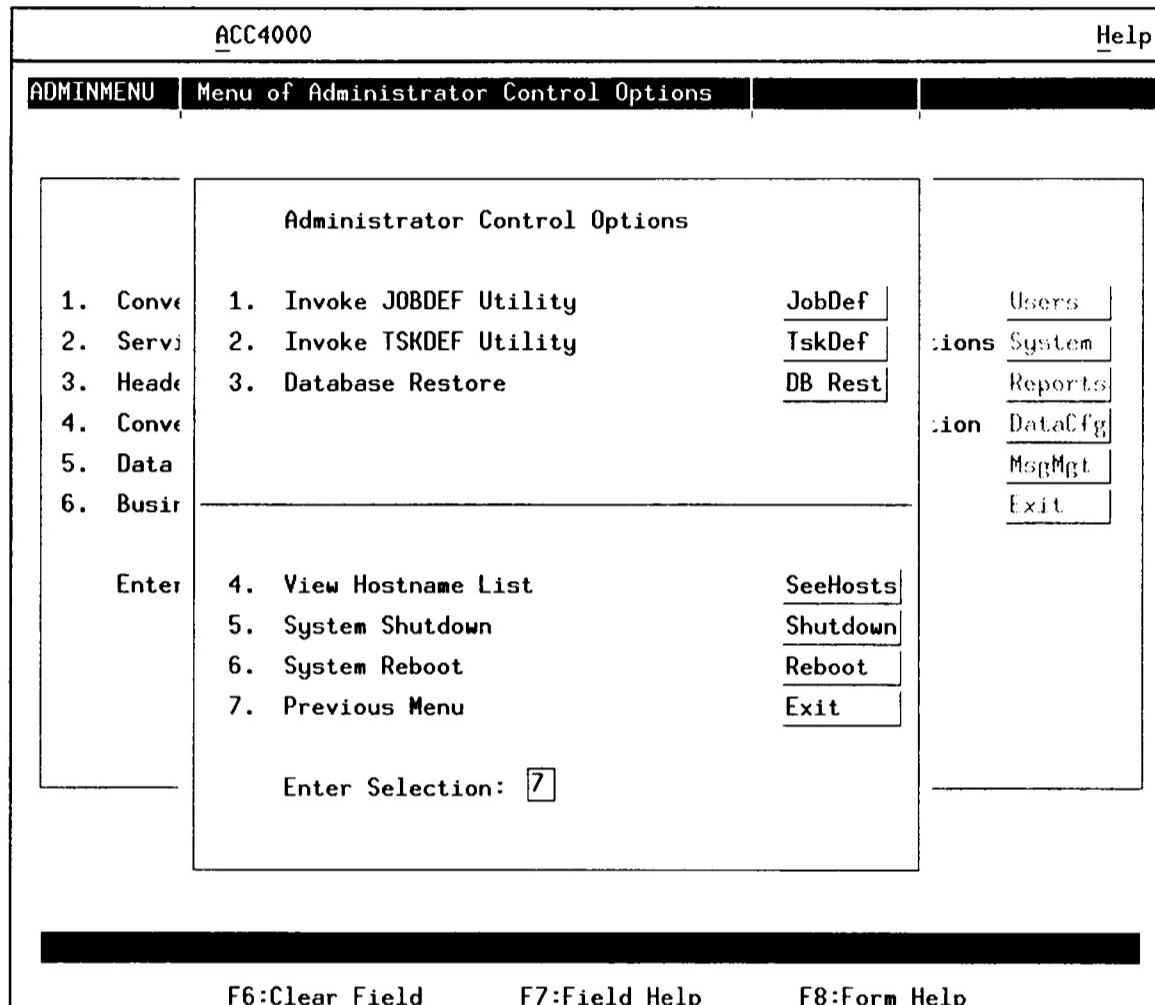
2. On the Control System Utility Options screen, click on the button adjacent to the name of the option you want to select. See the appropriate section in this chapter for information concerning the function you selected.

<b>Why Do You Use the Utility Options?</b>	
	<i>SETLEVEL Utility</i>
	Use the SETLEVEL utility to set the return transmit level on a two-way converters. You can print a report listing the subid and level for each converter processed, listing the subid and level for each responding converter processed, or run the report without a printout.
	<i>XREFUTIL Utility</i>
	Use the Channel Cross Reference (XREFUTIL) utility to send a channel cross reference map to the range of converters you select. You can also use the database utility DBPUNCH for this purpose.
	<i>PUNCHUTIL Utility</i>
	Use the PUNCHUTIL utility to set up a one-way converter to emulate a two-way converter so that you can send an event barker to the converter. For example, when the subscriber turns to an unauthorized channel the converter can display a specific event barker message asking the viewer to call for event authorizations instead of tuning to the barker channel displaying a not-authorized message.  Enter the range of converters in the shell window script to set the purchases to YES and the credit limit to 0 (zero) to enable the two-way emulation.
	<i>DCR Audio Key Editor</i>
	Use the DCR Audio Key Editor to create new audio key codes.

To choose an administrator function option:

1. On the Control System Options screen, click on the Admin button to select the Administrator Control option. The screen appears with six control options. The System Shutdown and System Reboot may be available for your use.

### How to Choose an Administrator Control Option



*Menu of Administrator Control Options / Administrator Control Options screen*

2. On the Administrator Control Options Screen, click on the button adjacent to the name of the option you want to select. See the appropriate section in this chapter for information concerning the function you selected.

**Why Do You Use the Administrator Options?**

*System Shutdown*

It may be necessary to shut down your system in order to move the equipment or because of a power outage. Use this utility insure an orderly system shutdown. An improper shutdown can possibly cause corruption of your database.

To shutdown the system:

1. Select System Shutdown and press the Enter key.
2. A prompt asks you to enter the super user password. Type the **super user password** and press Enter. The system begins the shutdown process.
3. A number of messages scroll across the screen as the system shuts down. When the process is complete this message appears:

The system is down.  
Press any key to reboot.

4. When you see this message, you can:
  - Safely turn off the computer
  - Press any key to reboot the computer

*System Reboot*

As part of your regular maintenance schedule, reboot your system once a week. Also reboot your system about two days prior to a major event.

To reboot the system:

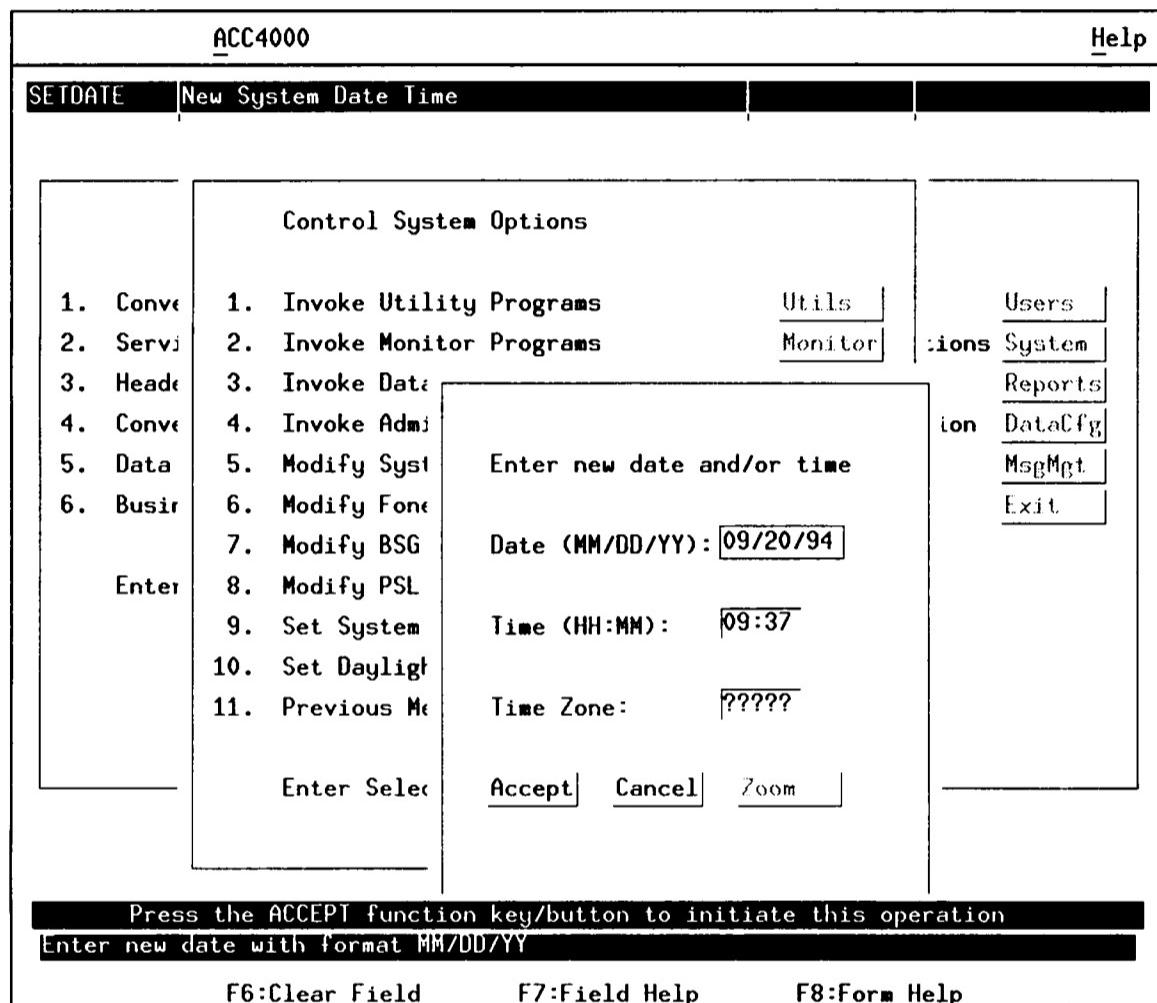
1. Select System Reboot and press Enter. A new 132 window will appear.
2. If a message asks you for the purpose of the reboot, type **clean up before a major event** or **regular maintenance**, and press Enter.
3. A prompt asks you to enter the super user password. Type the **super user password** and press Enter. The system begins the shutdown and reboot process.

In the reboot cycle, the system shuts down and then automatically reboots without any intervention on your part. Don't use the reboot option if you want the system to remain in a power-off state.

Use this feature to set the calendar and clock that are built into the computer's hardware. Once set, the date and time are important to keep track of when certain functions are performed.

To choose the Set System Date and Time option:

1. On the Control Systems Options screen, click on the SetDate button to select the Set System Date and Time option. The following screen overlays the option screen.



*New System Date Time screen*

This screen includes the following fields for data entry.

Field	Description
<i>Date</i>	A six-digit integer field for entering the date in a MM/DD/YY format where MM is the month, DD is the day, and YY is the year (for example, 01/05/94).
<i>Time</i>	A four digit integer field for entering the time in a HH:MM format where HH is the hour with a range from 0 (zero) through 23, and MM is the minute with a range from 0 (zero) through 59.

### Why Do You Use the Set System Date and Time Option?

### How to Choose the Set System Date and Time Option

Field (cont'd)	Description (cont'd)
<i>Time Zone</i>	A five alphanumeric character field for entering the time zone. Use the Zoom key to display the list of time zones.
	2. Click on the Accept button to implement the time change. You must reboot the system to implement the time change.

### Why Do You Set Daylight Savings Time?

You must make a daylight savings time change twice a year, once in the spring and again in the fall. If you don't offer pay per view, you can make the change at 2:00 am in the morning of the day the time changes. However, if you do offer pay per view, check with your program providers for their recommendation for the exact time to make the change.

### How to Choose the Set Daylight Savings Time Option

To choose the Set Daylight Savings Time option:

1. On the Control System Options screen, click on the SetDST button to select the Set Daylight Savings Time option. The following screen appears.

```
*****
*                                         *
*                                         *
*                                         ACC-4000 Modify Date Script for change of seasons *
*                                         *
*                                         1 - Schedule/abort time of day change
*                                         2 - Exit
*                                         *
*****
```

Enter Option ==> 1

Enter time to execute time change or return for default value:

RANGE	DEFAULT
-------	---------

Enter month [01-12] [09]:

Enter day [01-31] [2]:

Enter hour [00-23] [02]:

Enter minute [00-59] [00]:

Enter new time or return for default value:

RANGE	DEFAULT
-------	---------

Enter month [01-12] [09]: █

*Set Daylight Savings Time screen*

2. Enter the time that you want the time change to occur in the first set of date/time fields. The range field shows you the numerical range of values you can enter in each field. The default fields show you the current value in the field. Change the numbers in the default field to the date and time you want the time change to occur.

3. Enter the new time and date you want to implement when the time change occurs in the second set of date/time fields. Enter the same date you entered in the "time to execute time" in the fields above. In the time field enter:

*To set Daylight Savings Time* Add one hour to the time set in the "time to execute time" field above.

*To return to Standard Time* Subtract one hour from the time set in the "time to execute time" field above.

4. Click on the Accept button.

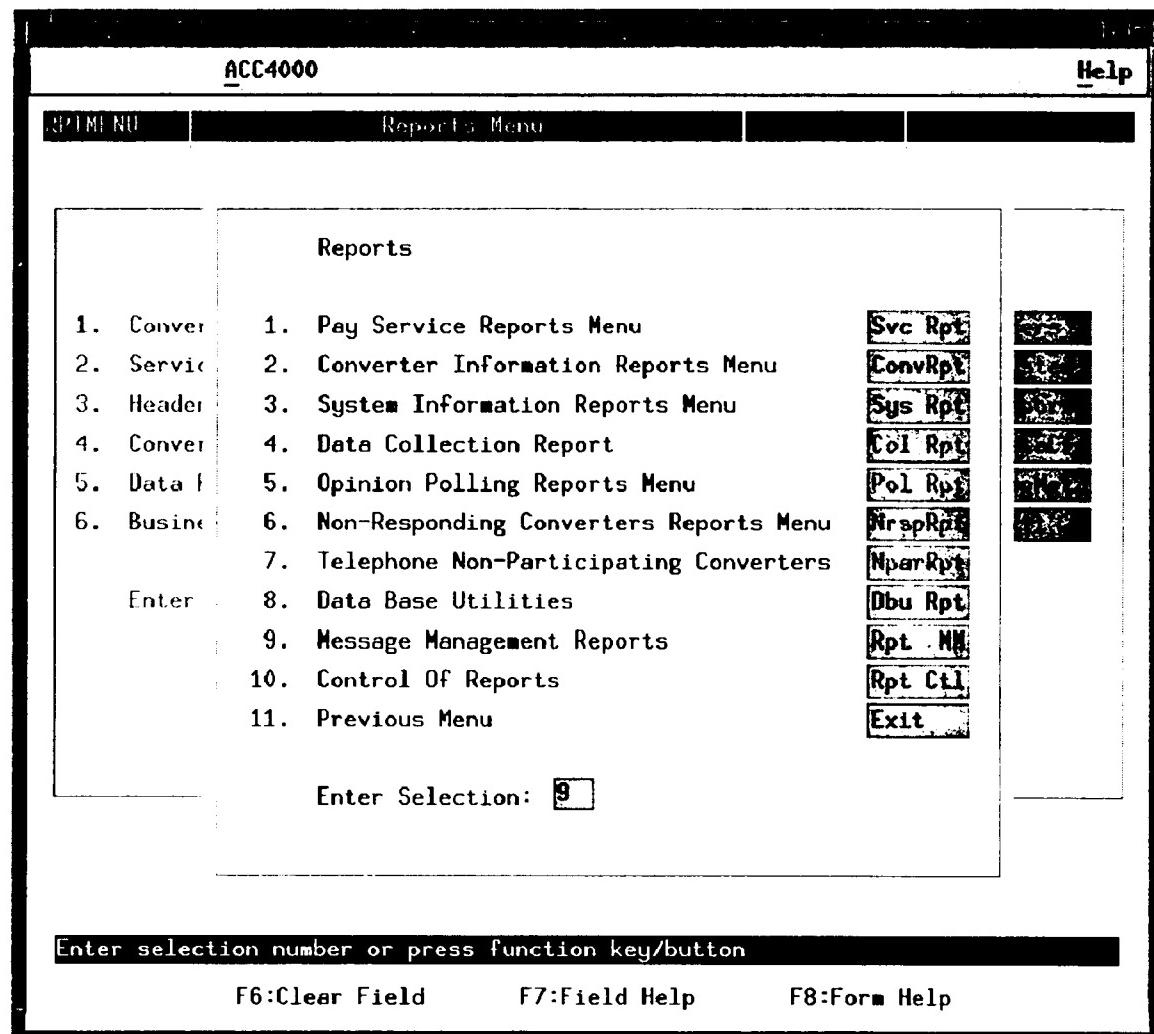


## 13 • Reports

The ACC-4000 allows you to print out reports quickly and easily. The Reports Menu organizes the reports into the following general categories. Under each of these category headings are a number of predefined reports.

### Introduction

### Types of Reports



### Reports Menu

You can "print" a report as a hard copy to a printer, as a display on the screen, or as a file to a disk. The printed copy of the report provides a method to distribute the information in hard copy. The screen display allows you to see the report output immediately. Use the disk file option to archive the information or copy it into a document.

### General Steps When Printing Reports

Follow these general steps to print a report:

1. Select the report category from the Reports Menu.

*Predefined reports* Some of the report categories listed on the Reports Menu display another screen with a submenu with a selection of predefined reports after you select the report category. If you choose a report with this option, you make an additional report selection on this submenu.

*Range* Some report types require you to select a range of converters after you select the report. Enter the range information. If you need additional information about range selection, see *Chapter 3, Converter Operations, Selecting a Range*.

2. Select where to direct the report output (printer, screen, or file). The system default sends the report to the printer.
3. For a report output directed to the printer, enter the number of copies. The system default is one copy.
4. For a report output directed to a disk file, the data in the report is automatically saved in this file with the default file name unless you enter another name.
5. Click on the Accept key to print the report or the Cancel key to return to the previous menu.

### Using the Reports

This chapter gives you specific information about each report category listed on the Report Menu including:

- Illustrations of each report category menu screen
- What information each report provides
- Why you use each report
- Descriptions of the report headings for each report category
- Sample reports

For a report category with several similar predefined reports, the report section contains one sample report. For example, report number six serves as the model for all seven of the Pay Service reports. However, since each System Information report gives you a different kind of information, that section provides you with a sample of each report.

**Recommendation:** Look at a sample report to determine if you want to actually run the report.

The ACC-4000 provides the seven predefined Pay Services reports listed on the following menu.

## Pay Service Reports

<b>Pay Service Reports</b>	
<b>Current:</b>	
1. Print Service sorted by Service Number	Svc Rpt
2. Print Packages sorted by Service Number	Pkg Rpt
<b>History:</b>	
3. Print History Services sorted by Service Number	HistRpt
4. Print History Services sorted by Time/Date in Ascending	HistAsc
5. Print History Services sorted by Time/Date in Descending	HistDes
<b>Channel Schedule:</b>	
6. Print Channel Schedule sorted by Channel Number	ChnNum
7. Print Channel Schedule sorted by Date	ChnDate
8. Previous Menu	Exit
Enter Selection: <b>8</b>	
Enter selection number or press function key/button	
F6:Clear Field      F7:Field Help      F8:Form Help	

*Pay Service Reports Menu/Pay Service Reports screen*

The Pay Service Reports provide you with the following information for individual services (events, packages, or subscriptions):

- Number of the channel used by the service
- Service Number and Service Code assigned to the service
- Two-way service status
- Type and description of scheduled service
- Date, time, and duration of the service
- Duration of the clear time preceding the service
- Time allowed for impulse purchases after the service begins
- Activation date and time for converter to be authorized for the service
- Total amount of time the service is purchasable
- Price if available

Use the Pay Service Reports to:

- Assist the technicians in tracking upcoming events
- Provide information about expired services

### What Information Do the Reports Provide?

### Why Do You Use the Reports?

**Recommendation:** Distribute the Channel Schedule Report (option 6) to the headend operators weekly (or more often, if required). Run the other reports as needed.

The Current Reports (options 1 and 2) and Channel Schedule Reports (options 6 and 7) assist the technicians in tracking upcoming events. Options 1 and 2 provide pay service information only. Options 6 and 7 are more useful because the reports contain both channel schedule and pay service information.

Option 6 is an effective listing for an operator to use in monitoring the daily activities. This report gives the complete listing of pay service and channel schedule times for all of your events. Use other reports to view selected pay service details.

The Pay Service History Reports (options 3 through 5) provide you with information about expired services. You can use this information to reconcile or resolve problems involving past purchases.

**Report Data:  
Pay Service**

The report data field list includes a description of the data provided in the sample report. The other Pay Service reports contain a subset of this information.

<b>Data Field</b>	<b>Description</b>
<i>Chan Number</i>	The channel number used by the service.
<i>Service Number</i>	The number uniquely identifying an event, subscription, or package.
<i>Service Code (tag)</i>	The number used as a tag to identify the video scrambling of the service.
<i>2</i>	Two-way. Identifies the converter service: Y = two-way service or N = one-way service.
<i>T</i>	Service type. Identifies the type of service: E = event, S = subscription, or P = package.
<i>CS Date</i>	Channel Schedule Date. Actual date of the service displayed in HH:MM format.
<i>CS Time</i>	Channel Schedule Time. Actual time of the service.
<i>CS Duration [Channel Schedule]</i>	Channel Schedule duration. Actual duration of the event displayed in HH:MM format.
<i>Clear Time</i>	Time the event remains unscrambled for preview.

<b>Data Field (cont'd)</b>	<b>Description (cont'd)</b>
<i>Purch Duration</i>	Purchase Duration. Time, including clear time, allowed for an impulse purchase on a two-way service displayed in :MM format.
<i>PS Date</i>	Pay Service Date. The converter authorization date for the event.
<i>PS Time</i>	Pay Service Time. The converter authorization time for the event.
<i>PS Duration</i>	Pay Service Duration. The date the service becomes active.
<i>Price</i>	The price of the service, if the information is available.

**Pay Service Report**  
**Example: Report 6**

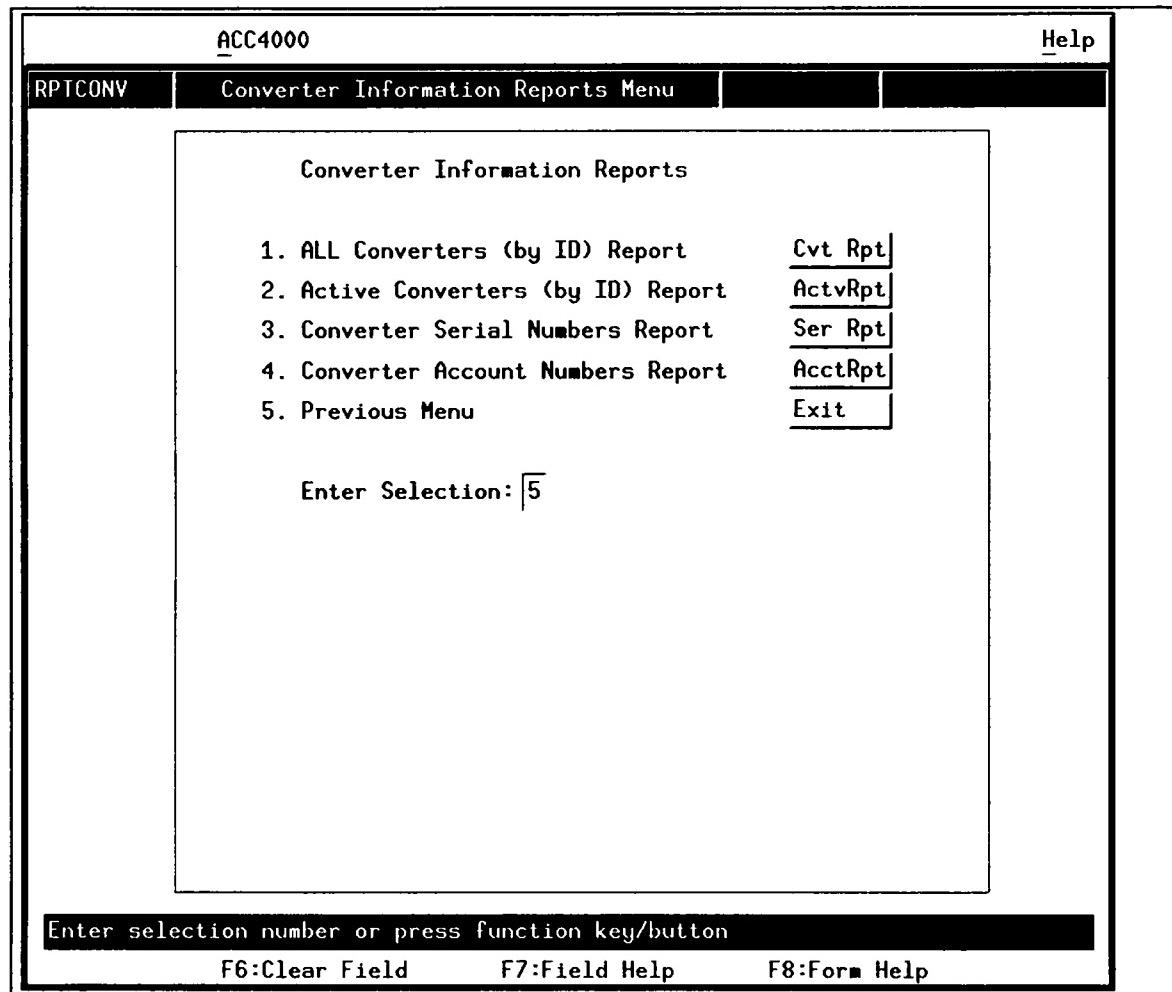
The following report example, Print Channel Schedule sorted by Channel Number, illustrates the report format.

PAY SERVICES/CHANNEL SCHEDULE REPORT SORTED BY CHANNEL NUMBER										
Line	Chn	Serv	Ser	CS	CS	CS	PS	PS	Price	
Item	Num	Cod	2	T	Description	Date	Durat	Date	Time	
1	A09	370	89	Y	E STAR TREK 11	Sep 15 1994 12:00AM	:29	5	:09 Sep 15 1994 12:00AM	8:00 3.95
2	A09	371	90	Y	E SEARCHING FOR BOBBY FISHER	Sep 15 1994 12:30AM	1:14	5	:09 Sep 15 1994 12:00AM	8:00 3.95
3	A09	372	91	Y	E HOOVER	Sep 15 1994 2:00AM	:44	5	:09 Sep 15 1994 12:00AM	8:00 4.25
4	A09	373	92	Y	E POST MORTEM	Sep 15 1994 2:45AM	:58	5	:09 Sep 15 1994 12:00AM	8:00 3.95
5	A09	374	93	Y	E JEFFREY DANNER STORY	Sep 15 1994 3:45AM	1:53	5	:09 Sep 15 1994 12:00AM	8:00 3.95
6	A09	375	94	Y	E CONDUCT UNBECOMING	Sep 15 1994 5:45AM	:29	5	:09 Sep 15 1994 12:00AM	8:00 3.95
7	A09	376	95	Y	E PICTURE OF DORIAN GRAY	Sep 15 1994 6:15AM	:59	5	:09 Sep 15 1994 6:00AM	8:00 3.95
8	A09	377	96	Y	E EXPERIENCED: JIMI HENDRIX	Sep 15 1994 7:15AM	:43	5	:09 Sep 15 1994 6:00AM	8:00 3.95
9	A09	378	97	Y	E FOUNTAINHEAD	Sep 15 1994 8:00AM	:44	5	:09 Sep 15 1994 6:00AM	8:00 3.95
10	A09	379	98	Y	E MAURICE	Sep 15 1994 8:45AM	1:29	5	:09 Sep 15 1994 6:00AM	8:00 3.95
11	A09	380	99	Y	E THE MONSTERS	Sep 15 1994 10:15AM	:44	5	:09 Sep 15 1994 6:00AM	8:00 3.95
12	A09	381	100	Y	E ALL THAT REMAINS	Sep 15 1994 11:00AM	1:59	5	:09 Sep 15 1994 6:00AM	8:00 3.95
13	A09	382	101	Y	E CLAIRE OF THE MOON	Sep 15 1994 1:00PM	:13	5	:09 Sep 15 1994 12:00PM	8:00 3.95
14	A09	383	102	Y	E EVEN COWGIRLS/BLUES	Sep 15 1994 1:15PM	:59	5	:09 Sep 15 1994 12:00PM	8:00 4.25
15	A09	384	103	Y	E SLITTING BULL	Sep 15 1994 2:15PM	1:14	5	:09 Sep 15 1994 12:00PM	8:00 3.95
16	A09	385	104	Y	E A SIMPLE PLAN	Sep 15 1994 3:30PM	:58	5	:09 Sep 15 1994 12:00PM	8:00 3.95
17	A09	386	205	Y	E STAR TREK 11	Sep 15 1994 5:30PM	:29	5	:09 Sep 15 1994 12:00PM	8:00 3.95
18	A09	387	206	Y	E SEARCHING FOR BOBBY FISHER	Sep 15 1994 6:00PM	:14	5	:09 Sep 15 1994 12:00PM	8:00 3.95
19	A09	388	207	Y	E HOOVER	Sep 15 1994 6:15PM	:13	5	:09 Sep 15 1994 6:00PM	8:00 4.25
20	A09	389	208	Y	E POST MORTEM	Sep 15 1994 6:30PM	:44	5	:09 Sep 15 1994 6:00PM	8:00 3.95
21	A09	390	241	Y	E JEFFREY DANNER STORY	Sep 15 1994 7:15PM	:59	5	:09 Sep 15 1994 6:00PM	8:00 3.95
22	A09	391	242	Y	E CONDUCT UNBECOMING	Sep 15 1994 8:15PM	1:27	5	:09 Sep 15 1994 6:00PM	8:00 3.95
23	A09	392	243	Y	E EXPERIENCED: JIMI HENDRIX	Sep 15 1994 9:45PM	:56	5	:09 Sep 15 1994 6:00PM	8:00 3.95
24	A09	393	244	Y	E PICTURE OF DORIAN GRAY	Sep 15 1994 10:45PM	2:13	5	:09 Sep 15 1994 6:00PM	8:00 3.95
25	A09	394	89	Y	E FOUNTAINHEAD	Sep 16 1994 1:00AM	:28	5	:09 Sep 16 1994 12:00AM	8:00 3.95
26	A09	395	90	Y	E MAURICE	Sep 16 1994 1:30AM	:44	5	:09 Sep 16 1994 12:00AM	8:00 3.95
27	A09	396	91	Y	E THE MONSTERS	Sep 16 1994 2:15AM	:27	5	:09 Sep 16 1994 12:00AM	8:00 3.95
28	A09	397	92	Y	E CLAIRE OF THE MOON	Sep 16 1994 5:15AM	:12	5	:09 Sep 16 1994 12:00AM	8:00 3.95

[Press RETURN to continue; q to quit] ■

The Converter Information Reports provide four predefined reports listed on the following screen. However, you can select the range of converters to include in each report.

## Converter Information Reports



*Converter Information Reports Menu/Converter Information Reports screen*

The Converter Information Reports provide you with the following information for a range of active and inactive converters or a range of only active converters:

- Converter ID (SUBID), Serial Number and Account Number.
- Status (active/inactive, initialized, responding).
- Options installed (parental control, remote, volume control, favorite channel, morality, time control programming).
- Total number of services and the number of each service as defined in the pay service common file.

### What Information Do the Reports Provide?

**Why Do You Use the Reports?**

The Converter Information Reports provide pay service details for individual converters.

Run these reports to see detailed converter information if you find errors or problems with a converter(s) in the:

- Non-responding two-way reports
- Non-participating FONE-way reports

**Report Data:  
Converter Information**

All of the converter reports use the same format and column headings. The data field list gives you a description of the converter data fields.

<b>Data Field</b>	<b>Description</b>
<i>SUBID</i>	Number assigned to the converter (also called Converter ID or PROM ID).
<i>ACCOUNT</i>	Billing system converter number.
<i>ACT</i>	Active status.
<i>REM</i>	Remote-capable.
<i>INIT</i>	Converter initialization status.
<i>RESP</i>	Response status for a two-way or FONE-way system.
<i>PURC</i>	Purchasable account for a two-way or FONE-way system.
<i>PC</i>	Parental control for a two-way or FONE-way system.
<i>VC</i>	Volume control for a two-way or FONE-way system.
<i>FC</i>	Favorite channel for a two-way or FONE-way system.
<i>TCP</i>	Time control programming for a two-way or FONE-way system.
<i>AUTO</i>	Field not currently available.
<i>XREF</i>	Channel cross reference map number.
<i>TYPE</i>	Converter type number.
<i>STAT</i>	Converter return status, usually set by the billing system.

<b>Data Field (cont'd)</b>	<b>Description (cont'd)</b>
<i>FONE</i>	Phone number index for the converter modem.
<i>SERV</i>	Total number of services enabled for the converter.
<i>SERVICE NUMBER COLUMNS</i>	List of services authorized for the converter.

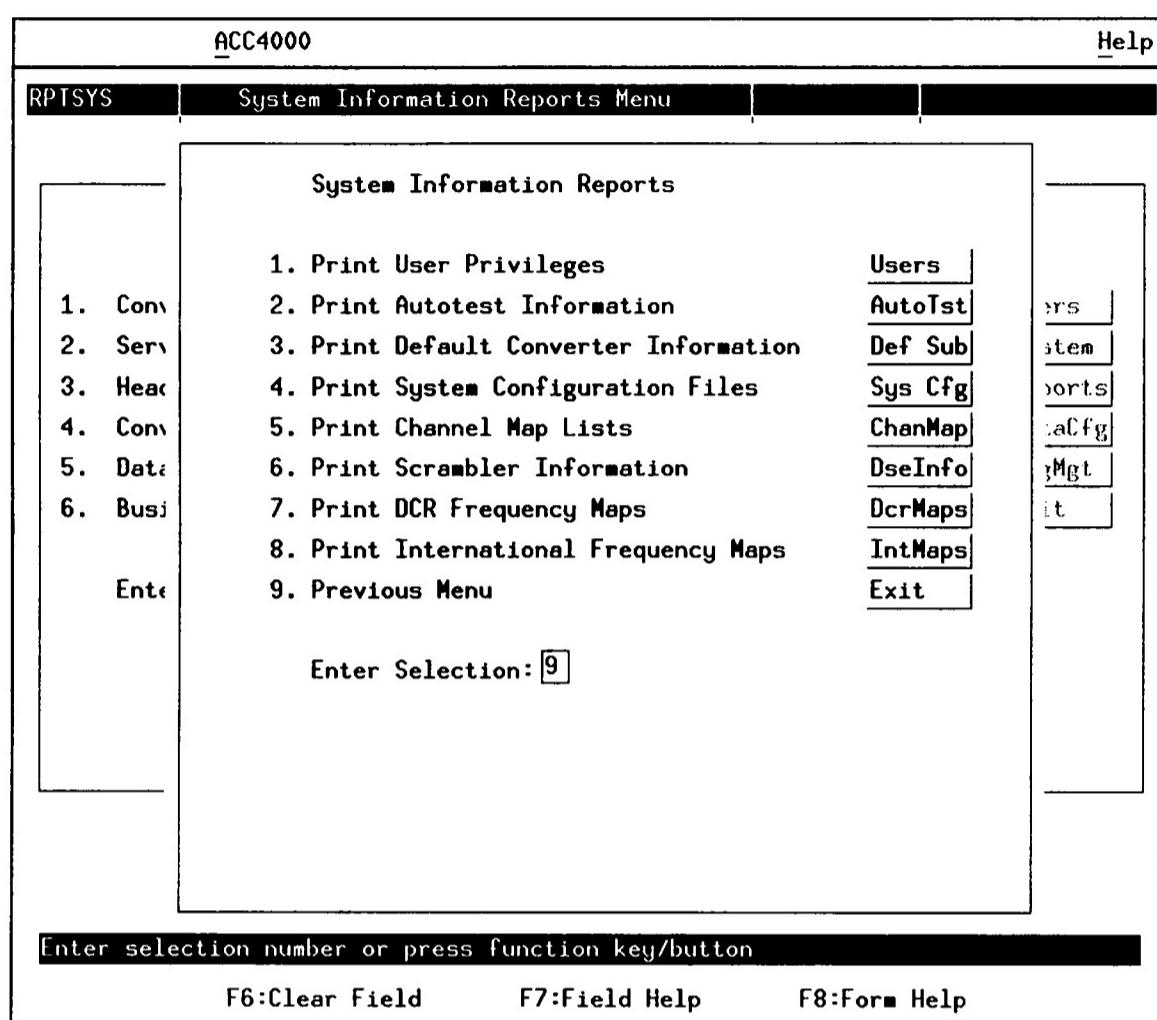
**Report Example:**  
**Converter Information**  
**Report 1**

The following report example, Report 1 All Converters (by ID) Report, illustrates the Converter Information Reports format. All four reports contain the same data fields in the report header.

ITEM	SUBID	Serial #	Account	SERVICE NUMBER COLUMNS (1-10, 11-20, 21-30, 31-32)									
				I	R	P	M	A	X	T	S	F	S
1	1/	J6E4031880	45	Y	Y	Y	N	N	Y	N	N	Y	N
2	2/	T7F1000177	46	Y	Y	Y	N	Y	Y	N	N	2	10
3	3/	T8E20089771	11F	Y	Y	Y	N	Y	Y	N	N	1	15
4	4/	T7d12000007	41	Y	Y	Y	N	Y	Y	N	N	5	21
5	5/	T3030822354	42	Y	Y	Y	N	N	N	N	N	1	1
6	6/	T408149094	40	Y	Y	Y	N	N	N	N	N	1	3
7	7/	T9d1500011	35	Y	Y	Y	N	Y	Y	N	N	1	18
8	8/	T407022351	33	Y	Y	Y	N	N	N	N	N	1	3
9	9/	T408010826	34	Y	Y	Y	N	N	N	N	N	1	3
10	10/	T4L1000094	23	Y	Y	Y	N	Y	Y	N	N	4	9
11	11/	T2L4600869	24	Y	Y	Y	N	Y	Y	N	N	6	24
12	12/	J4J1000030	77	Y	Y	Y	N	N	N	N	N	1	7
13	13/	T8E20086774	11D	Y	Y	Y	N	Y	Y	N	N	1	15
14	14/	T407022708	32	Y	Y	Y	N	N	N	N	N	1	3
15	15/	J6F0037969	59	Y	Y	Y	N	Y	Y	N	N	2	12
16	16/	T164302900	100	Y	Y	Y	N	Y	Y	N	N	1	27
17	17/	T6d1006860	61	Y	Y	Y	N	Y	Y	N	N	1	1
18	18/	T5E1000351	67	Y	Y	Y	N	Y	Y	N	N	4	9
19	19/	T7d1200009	70	Y	Y	Y	N	Y	Y	N	N	5	21
20	20/	300000/	t1.90004999	Y	Y	Y	N	Y	Y	N	N	1	15
21	21/	J1K000000100	t1.90005000	Y	Y	Y	N	Y	Y	N	N	1	15
22	22/	J1K000000200	t1.90005001	Y	Y	Y	N	Y	Y	N	N	1	15
23	23/	J1K000000300	t1.90005002	Y	Y	Y	N	Y	Y	N	N	1	15
24	24/	J1K000000400	t1.90005003	Y	Y	Y	N	Y	Y	N	N	1	15
25	25/	J1K000000500	t1.90005004	Y	Y	Y	N	Y	Y	N	N	1	15
26	26/	J1K000000600	t1.90005005	Y	Y	Y	N	Y	Y	N	N	1	15
27	27/	J1K000000700	t1.90005006	Y	Y	Y	N	Y	Y	N	N	1	15
28	28/	J1K000000800	t1.90005007	Y	Y	Y	N	Y	Y	N	N	1	15

[Press RETURN to continue; q to quit]■

System Information Reports provide detailed system data in the eight categories listed on the following screen.



*System Information Reports Menu / System Information Reports screen*

*Print User Privileges*

Provides you with the following operator information:

- Operator ID
- Operator name
- Operator class
- Functions accessible to the operator

**What Information Do the Reports Provide?**

*Print Autotest Information*

Feature not implemented.

*Print Default Converter Information*

Lists the value assigned by the system at initialization for 30 converter characteristics for each converter type.

## System Information Reports

<i>Print System Configuration</i>	The following reports list dozens of parameters about the current system configuration: <ul style="list-style-type: none"><li>• System Configuration File</li><li>• FONE Configuration File</li><li>• Business System Gateway (BSG) Configuration File</li><li>• Pay Service Loader (PSL) Configuration File</li></ul>
<i>Print Channel Map Lists</i>	Prints the list of channel maps available on the system. Up to 99 maps can be stored.
<i>Print Scrambler Information</i>	Lists the significant parameters regarding the scrambler and its capabilities including: <ul style="list-style-type: none"><li>• Scrambler number and name</li><li>• Channel number</li><li>• Two-way capability</li><li>• Auto control capability</li><li>• Other parameters</li></ul>
<i>Print DCR Frequency Maps</i>	Provides the DCR frequency map number and detailed information about each channel displayed on each map.
<i>Print International Maps</i>	Provides the channel map number and the channel, audio frequency, and spacing information for each map.

### **Why Do You Use the Reports?**

Use the system information reports as a quick reference to see the data about specific aspects of your system. The data is collected and printed in a convenient format for distribution to plant personnel.

#### *Print User Privileges*

Use this report to verify the access rights of individual operators.

#### *Autotest Information*

This report is not currently available.

#### *Default Converter Information*

Use this report to review converter descriptions.

### *System Configuration*

The System Configuration reports capture the information in the system configuration files and present it in a table format without showing the file line numbers.

### *Channel Map Lists*

Use the Channel Map Lists to see the Converter Types assigned to each map. The reports also include the displayed and tuned channels for each map and other channel information.

### *Scrambler Information*

Use the Scrambler Information to list each scrambler attached to the ACC-4000. This report provides configuration information about each scrambler.

### *DCR Frequency Maps*

Use the DCR Frequency Maps to list the configuration information for each channel displayed on each map.

### *International Frequency Maps*

This report lists the international output and frequency maps. For each map the report lists the channel tuned, the starting audio frequency, and spacing.

The following report examples are included:

### **Report Examples**

- User Privileges
- Default Converter Information
- Channel Map Lists
- Scrambler Information
- DCR Frequency Maps
- International Frequency Maps

### *System Configuration Files*

The System Configuration File reports are not listed in this chapter. These detailed reports list dozens of parameters about the current system configuration including the version of software in use, number of ANIC cards, number of poll passes, Baud rate, Up Stream frequency, subscribers in a partition, number of subscribers, number of service codes, and more. The reports are presented in a table format without the line numbers found in the actual files.

This information in the tables duplicates the information contained in the file listings in *Volume III, System Administrator Reference Guide*. See the individual chapters for each file in that volume for descriptions of the data contained each of the files.

**Report Data:  
User Privileges**

The report data field list includes a description of the data provided in this report.

<b>Data Field</b>	<b>Description</b>
<i>Operator ID</i>	A number assigned to each system user.
<i>Operator Name</i>	The name of each user granted access rights.
<i>Class</i>	The name for a grouping of access rights to objects.
<i>Object</i>	The name of one of the 11 major categories of operations a user can perform.
<i>Operation</i>	The name of one of the operations that a user can perform within one of the 11 major objects.

## Report Example: User Privileges

[Press RETURN to continue; q to quit]

**Report Data:  
Default Converter  
Information**

The report data field list includes a description of the data provided in this report.

<b>Data Field</b>	<b>Description</b>
<i>CONV TYPE</i>	Gives the Converter Type number.
<i>PART TYPE</i>	Identifies the converter partition type as two-way, FONE-way, or one-way.
<i>ACTIVE</i>	Shows the status as active or inactive.
<i>PURCH ENABLE</i>	Allows a subscriber with a converter with IPPV features to make local purchases.
<i>TIME ZONE</i>	Sets the system time to local time to represent the hour offset from system time.
<i>TIME OUT</i>	For one-way converters: this value represents the number of hours before a converter turns off if it doesn't receive its packet of data from the data stream.  For two-way and FONE-way converters: the value represents the time out counter starts when the first purchase is made.
<i>CREDIT LIMIT</i>	The maximum purchase limit allowed for the converter.
<i>CONV. STATUS</i>	A value set by the billing system the ACC-4000 uses as a reporting feature, but not to control the converter.
<i>REMOTE UNIT</i>	Shows the status of the remote control option on the converter as enabled or disabled.
<i>EMERG ALERT</i>	Allows the converter type 5 (STARCOM 5 or XT5) to respond to alert types.
<i>TUNING TYPE</i>	Defines the tuning type as: S = standard; H = HRC (Harmonically Related Carriers); or I = IRC (Incrementally Related Carriers).
<i>CHNL XREF</i>	Identifies the number of the converter's channel map.
<i>OUTPUT CHNL</i>	Shows the status of the output channel: Y = three and N = two or four.

<b>Data Field (cont'd)</b>	<b>Description (cont'd)</b>
<i>FONE INDEX</i>	The number a converter calls when requested to call into the system.
<i>FONE EXCH</i>	Field not used.
<i>HUB NUM</i>	The number converter's hub connection.
<i>AMPLIFIER</i>	The number of the converter's amplifier connection.
<i>RF-RETURN LEVEL</i>	The return level for a two-way converter.
<i>FREQ MAP INDEX</i>	The index number for the US frequency map output for DCR.
<i>INTERNATIONAL OUTPUT CHAN</i>	For international use only.
<i>AUX 12V OUTPUT</i>	For international use only.
<i>AUTOTEST</i>	Field not used.
<i>LAST/FAV CHANNEL</i>	The status of the converter's response to the last channel recall and the favorite channel map commands from a remote controller.
<i>TIME DISPLAY/TCP</i>	Time display and timing control programming for a two-way or FONE-way system.
<i>VOLUME CONTROL</i>	Volume control for a two-way or FONE-way system.
<i>P.C. MORALITY</i>	Field used only by XT5 converters.
<i>P.C. LOCK</i>	Parental control for a two-way or FONE-way system.
<i>MS-STAT</i>	This field applies only to converters of the M/S type and identifies the converter as a master or a slave.
<i>MS-PAIR CODE</i>	A MS-pair code number of each master and its slave converters.
<i>NUMBER OF PAY SERVICES</i>	The number of pay services on the converter.
<i>SERVICE NUMBERS</i>	The services authorized on the converter.

**Report Example:**  
**Default Converter**  
**Information**

The sample report shows you an example of the printed Default Converter Information report.

DEFAULT CONVERTER INFORMATION REPORT																		
CONV TYPE	PART TYPE	ACT- IVE	PURCH ENABLE	TIME ZONE	TIME OUT	CREDIT LIMIT	CONV. STATUS	REMOTE UNIT	EMERG ALERT	TUNING TYPE	CHAN XREF	OUTPUT CHAN	FONE INDEX	FONE EXCH	HUB NUM	AMPLI- FIER	RF-RETURN LEVEL	
1	0	Y	N		384				?	S	1		1	1	1		15	
FREQ MAP INDEX	INTERNATIONAL OUTPUT CHAN	AUX 12V OUTPUT	AUTOTEST	LAST/FAV CHANNEL	TIME DISPLAY/TCP	VOLUME CONTROL	P.C. MORALITY	P.C. LOCK	MS-STAT	MS-PAIR CODE								1
NUMBER OF PAY SERVICES : 0 SERVICE NUMBERS :																		

The report data field list includes a description of the data provided in this report.

**Report Data:  
Channel Map**

<b>Data Field</b>	<b>Description</b>
<i>Converter Types</i>	The range of Converter Types using the channel map (for example, 15 to 20).
<i>A Channel Limit</i>	The highest channel a subscriber can select on the A cable of the converter.
<i>B Channel Limit</i>	The highest channel a subscriber can select on the B cable of the converter.
<i>Parental Control</i>	The channel number for displaying a parental control barker.
<i>Deauthorization</i>	The channel number for displaying a deauthorization barker.
<i>Disconnect</i>	The channel number for displaying a disconnect barker.
<i>Event</i>	The channel number for displaying an event barker.
<i>Channel Displayed</i>	The logical channel used by the converter.
<i>Channel Tuned</i>	The physical channel used by the converter.

**Report Example:**  
**Channel Map Lists**

STARTRAK Channel Cross Reference Map 01										Date 07/29/94	
Converter Types: 15 to 20											
		Displayed	Tuned	Displayed	Tuned	Displayed	Tuned	Displayed	Tuned	Displayed	Tuned
Channel	Channel	Channel	Channel	Channel	Channel	Channel	Channel	Channel	Channel	Channel	Channel
A01	A02	A34	A34	A67	A67	B01	Skip	B34	B34	B67	B67
A02	A02	A35	A35	A68	A68	B02	B02	B35	B35	B68	B68
A03	A03	A36	A36	A69	A69	B03	B03	B36	B36	B69	B69
A04	A04	A37	A37	A70	A70	B04	B04	B37	B37	B70	B70
A05	A05	A38	A38	A71	A71	B05	B05	B38	B38	B71	B71
A06	A06	A39	A39	A72	A72	B06	B06	B39	B39	B72	B72
A07	A07	A40	A40	A73	A73	B07	B07	B40	B40	B73	B73
A08	A08	A41	A41	A74	A74	B08	B08	B41	B41	B74	B74
[Press RETURN to continue; q to quit] █											

The title of the printed Scrambler Data report is DSE/DVE Information Report. The report data field list includes a description of the data provided in this report.

### **Report Data: Scrambler Data**

<b>Data Field</b>	<b>Description</b>
<i>SCRAMBLER NUMBER</i>	A scrambler's identification number.
<i>SCRAMBLER NAME</i>	The scrambler's name.
<i>CHANNEL NUMBER</i>	The channel number used by the scrambler.
<i>A/B CABLE</i>	Designates the A or B cable.
<i>TWO-WAY</i>	States that the scrambler is capable of two-way communications.
<i>DSE MODEL</i>	States the type of scrambler installed, for example, MVP.
<i>DVE PRESENT</i>	Shows the presence of a digital video/encoder MVP.
<i>TIME INTERVAL</i>	Shows the dynamic mode time interval.
<i>DYNAMIC MODE</i>	Shows the dynamic scrambling setting.
<i>SYNC SUPPRESSION</i>	Shows the scrambling mode.
<i>SERVICE CODE</i>	The number used as a tag to identify the scrambling of the event.
<i>DESCRIPTION</i>	Scrambler description, printed if available.
<i>STARPORT</i>	Indicates if the scrambler includes STARPORT devices.
<i>AUTO CONTROL</i>	Indicates if the scrambler is automatically controlled by the ACC-4000.
<i>RESPONDING</i>	Indicates the response status for two-way communications.
<i>VIDEO INVERSION</i>	Indicates the type of video inversion.
<i>DVE MODEL</i>	Specifies the DVE model, if one is present.
<i>AUDIO INVERSION</i>	Indicates whether audio inversion is used.

**Report Example:**  
**Scrambler Information**

DSE/DVE INFORMATION REPORT -----	
SCRAMBLER NUMBER -----	260100
SCRAMBLER NAME -----	JOANNE
A/B CABLE -----	A
CHANNEL NUMBER -----	002
TWO WAY -----	Y
DSE MODEL -----	MVP
DVE PRESENT -----	Y
TIME INTERVAL -----	00000001
DYNAMIC MODE -----	1
SYNC SUPPRESSION -----	04
SERVICE CODE -----	011
DESCRIPTION -----	CHANNEL 2
STARPORT -----	N
AUTO CONTROL -----	N
RESPONDING -----	N
VIDEO INVERSION -----	
DVE MODEL -----	NULL
AUDIO INVERSION -----	N
SCRAMBLER NUMBER -----	260101
SCRAMBLER NAME -----	J01
A/B CABLE -----	A
CHANNEL NUMBER -----	003
TWO WAY -----	Y
DSE MODEL -----	MVP
DVE PRESENT -----	Y
TIME INTERVAL -----	00000001
DYNAMIC MODE -----	1
SYNC SUPPRESSION -----	04
SERVICE CODE -----	012
DESCRIPTION -----	CHANNEL 3
STARPORT -----	N
AUTO CONTROL -----	N
RESPONDING -----	N
VIDEO INVERSION -----	
DVE MODEL -----	NULL
Press RETURN to continue; q to quit]]	
OPERATING SCRAMBLER PROGRAM. PLEASE WAIT WHILE COMPUTER COMPUTES...]	

The report data field list includes a description of the data provided in this report.

Data Field	Description
<i>Channel Displayed</i>	Lists the channel displayed.
<i>Frequency Tuned</i>	Lists the frequency.
<i>Audio Format</i>	Lists the audio format.

### Report Data: DCR Frequency Maps

Digital Cable Radio Frequency Maps						
DER Map Number: 1		Simulcast Channel Minimum: 1	Simulcast Channel Maximum: 99	Channel Displayed	Frequency Tuned	Audio Format
D01	50.0	4		D51	50.0	4
D02	50.0	4		D52	50.0	4
D03	50.0	4		D53	50.0	4
D04	50.0	4		D54	50.0	4
D05	50.0	4		D55	50.0	4
D06	50.0	4		D56	50.0	4
D07	50.0	4		D57	50.0	4
D08	50.0	4		D58	50.0	4
D09	50.0	4		D59	50.0	4
D10	50.0	4		D60	50.0	4
D11	50.0	4		D61	50.0	4
D12	50.0	4		D62	50.0	4
D13	50.0	4		D63	50.0	4
D14	50.0	4		D64	50.0	4
D15	50.0	4		D65	50.0	4
D16	50.0	4		D66	50.0	4
D17	50.0	4		D67	50.0	4
D18	50.0	4		D68	50.0	4
D19	50.0	4		D69	50.0	4
D20	50.0	4		D70	50.0	4
D21	50.0	4		D71	50.0	4
D22	50.0	4		D72	50.0	4
D23	50.0	4		D73	50.0	4
D24	50.0	4		D74	50.0	4
D25	50.0	4		D75	50.0	4
D26	50.0	4		D76	50.0	4
D27	50.0	4		D77	50.0	4
D28	50.0	4		D78	50.0	4
D29	50.0	4		D79	50.0	4
D30	50.0	4		D80	50.0	4
D31	50.0	4		D81	50.0	4
D32	50.0	4		D82	50.0	4
D33	50.0	4		D83	50.0	4

### Report Example: DCR Frequency Maps

[Press RETURN to continue; q to quit]■

**Report Data:**  
**International Output and Frequency Maps**

The report shows the International Output and Frequency Maps. The report data field list includes a description of the data provided in this report.

Data Field	Description
<i>Output Map Number</i>	Number of the specific map access.
<i>Comment</i>	Describes the output or frequency map.
<i>Channel Tuned</i>	The converter's physical channel.
<i>Starting Audio Freq</i>	Specifies the map's audio frequency.
<i>Spacing</i>	Sets the space between the channels.
<i>Frequency Map Number</i>	Number of the specific map access.

**Report Example:**  
**International Output and Frequency Maps**

International Output Maps			
Output Map Number:	1	Starting Audio Freq	Comment: OUTPUT 1 Spacing
Channel Tuned	3	0.125	5
Output Map Number:	2	Starting Audio Freq	Comment: OUTPUT 2 Spacing
Channel Tuned	2	5.125	5

International Frequency Maps			
Frequency Map Number:	1	Starting Audio Freq	Comment: 000 FREQ. MAP Spacing
Channel Tuned	1	0.125	5
3	0.125	5	
5	0.125	5	
7	0.125	5	
9	0.250	5	
11	0.250	5	
13	0.125	5	
17	0.125	5	

Frequency Map Number: 2	Comment: EVEN FREQ. MAP [Press RETURN to continue; q to quit]
-------------------------	---

The Data Collection Report provides comprehensive information about customer purchases. The ACC-4000 system allows you to choose the time period to be covered by the report, and also how this information will be organized. The following report menu shows you the various sort options:

**ACC4000**

**RPTCOL** | **Data Collection Report** | **Help**

**Data Collection Report**

Sort Keys: 1- Converter ID 2- Serial Number 3- Account Number  
4- Description, Event, ID 5- Description, Account, Serial Number  
6- Description, Account, ID

Enter Listing Order Key (1-6): 1

Archived Data Collection Dates From:  To:

Enter Dates For Report: From:  To:   
(If no dates are entered report will contain all current purchases)

Accept      Cancel

Enter Selection: 4

Press the ACCEPT function key/button to initiate this operation

**F6:Clear Field**    **F7:Field Help**    **F8:Form Help**

*Data Collection Report screen*

The Data Collection reports can provide you with the following information:

- Polling date and time of each converter polled.
- Purchase date, time and description of each event purchased for each converter polled.
- Billing system Account Number, Service Number and Service Code for each event purchased for each converter polled.

### What Information Do the Reports Provide?

**Why Do You Use the Reports?**

Use this report to print purchases collected from two-way and FONE-way converters.

**Recommendation:** Use the following procedure to perform a complete data collection.

- View the results of the Data Collection from the main logger screen and display data collection during the data collection typically done each evening.
- Run the Data Collection Report the next day and compare it with the screen printout. If there are discrepancies check the statistics for the single and range data collections.

**Report Data:  
Data Collection**

The report data field list includes a description of the data provided in this report.

<b>Data Field</b>	<b>Description</b>
<i>Poll Date</i>	Lists the date and time of data collection.
<i>Poll Time</i>	
<i>Purchase Date</i>	Lists the date and time of each event purchased by each converter polled.
<i>Purchase Time</i>	
<i>Description</i>	Provides the title of each event purchased.
<i>Converter ID</i>	Identifies each converter polled by ID
<i>Serial Number</i>	and Serial Number.
<i>Account Number</i>	Lists the Account Number assigned by the billing system.
<i>Evt Num</i>	Lists the Service Number in the pay service table for the event.
<i>Evt Code</i>	Lists the Service Code purchased.
<i>Src</i>	The polling source of the task that performed the data collection.

The following report example, Report 2 Data Collection Report sorted by Serial Number, illustrates the data collection report format and contains the specific data collection data fields.

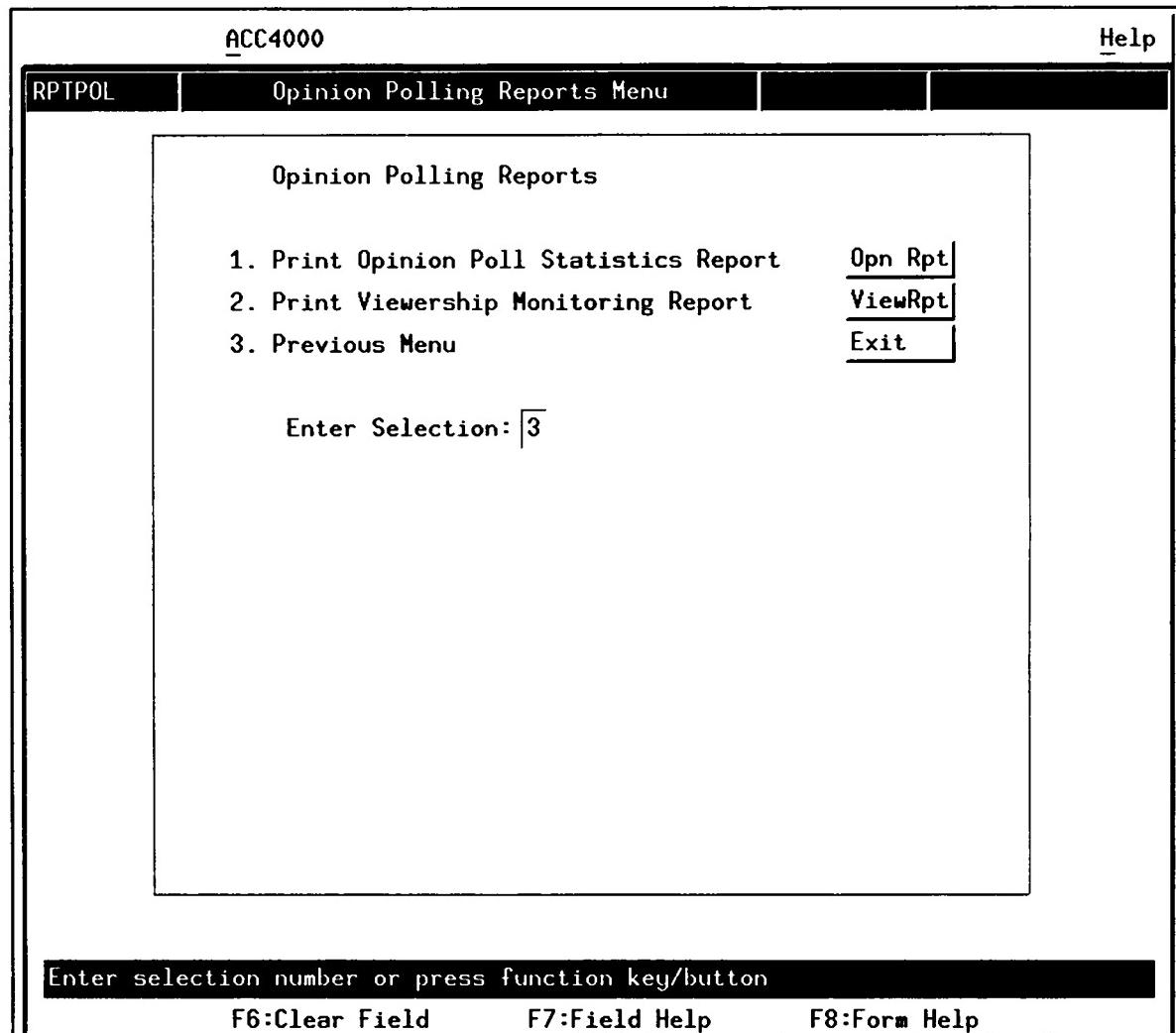
### Report Example: Data Collection

PURCHASES REPORT						
Item Num	Poll Date	Poll Time	Purchase Date	Purchase Time	Description	ID
						Converter ID
1	07/01/94	10:38	07/01/94	10:38	LAURIE	328200
2	07/01/94	10:39	07/01/94	10:38	LAURIE	328200
3	07/01/94	10:42	07/01/94	10:38	LAURIE	328200
4	07/01/94	10:46	07/01/94	10:44	LAURIE	328200
5	07/01/94	10:46	07/01/94	10:45	LAURIE	328200
6	07/01/94	10:47	07/01/94	10:38	LAURIE	328200
7	07/01/94	10:47	07/01/94	10:44	LAURIE	328200
8	07/01/94	10:47	07/01/94	10:45	LAURIE	328200
9	07/01/94	10:49	07/01/94	10:38	LAURIE	328200
10	07/01/94	10:49	07/01/94	10:44	LAURIE	328200
11	07/01/94	10:49	07/01/94	10:45	LAURIE	328200
12	07/01/94	10:49	07/01/94	10:47	LAURIE	328200
13	07/01/94	10:55	07/01/94	10:38	LAURIE	328200
14	07/01/94	10:55	07/01/94	10:44	LAURIE	328200
15	07/01/94	10:55	07/01/94	10:45	LAURIE	328200
16	07/01/94	10:55	07/01/94	10:47	LAURIE	328200
17	08/01/94	14:10	08/01/94	13:57	ROAGTES, SUBS AND GRINDERS	327803
					J7D4035696	1B
						494
						194
						5

[Press RETURN to continue; q to quit]

## Opinion Polling Reports

The Opinion Polling Reports screen include the Opinion Poll Statistics Report and the Viewership Monitoring Report.



*Opinion Polling Reports Menu/Opinion Polling screen*

### What Information Do the Reports Provide?

The Opinion Polling reports provide you with the following information for each converter polled:

- Opinion Poll Statistics tells you the number of responses per response number and the percentage of the total.
- Viewership Monitoring report tells you the number of converters tuned to services at the time of the poll and calculates the percentage converters tuned to each service.

### Why Do You Use the Reports?

The Opinion Poll allows you to enter a Service Code and poll viewers watching that Service Code. The question must be phrased so that the viewer can respond with a number between 1 and 255. For example, if you ask the viewers how much each subscriber household spends at the grocery store each week, the viewer response is a number between 1 and 255. The viewer responds by entering the number on the remote control.

The Viewership Monitoring Report tells you the total number and the percentage of subscribers watching a particular Service Code.

However, this is not a real-time report. The viewing window can be from one to five minutes before the polling time.

The report data field list includes a description of the data provided in this report.

<b>Data Field</b>	<b>Description</b>
<i>RESPONSE NUMBER</i>	The response number the viewer enters.
<i>NUMBER OF RESPONSES</i>	The number of viewers responding for each number.
<i>PERCENTAGE OF TOTAL</i>	The percentage of the total number of viewers that responded for each response number.

**Report Data:  
Opinion Poll  
Statistics**

<b>OPINION POLLING REPORT</b>		
<b>RESPONSE NUMBER</b>	<b>NUMBER OF RESPONSES</b>	<b>PERCENTAGE OF TOTAL</b>
<b>DATE OF POLL : 08/01/94 14:51</b>		
0	0.	0
1	0.	0
2	0.	0
3	0.	0
4	0.	0
5	0.	0
6	0.	0
7	0.	0
8	0.	0
9	0.	0
10	0.	0
11	0.	0
12	0.	0
13	0.	0
14	0.	0
15	0.	0
16	0.	0
17	0.	0
18	0.	0
19	0.	0
20	0.	0
21	0.	0
22	0.	0
23	0.	0
24	0.	0
25	0.	0
26	0.	0
27	0.	0
28	0.	0
29	0.	0

**Report Example:  
Opinion Poll  
Statistics**

**Report Data:  
Viewership  
Monitoring Report**

The report data field list includes a description of the data provided in this report.

<b>Data Field</b>	<b>Description</b>
<i>DESCRIPTION</i>	The description of service being viewed.
<i>SERVICE NUMBER</i>	A number uniquely identifying a service being viewed for billing purposes.
<i>SERVICE CODE</i>	A number used as a tag to identify the video scrambling of service being viewed.
<i>NUMBER OF RESPONSES</i>	The number of subscribers viewing the service.
<i>PERCENTAGE OF TOTAL</i>	The percentage of the total number of converters polled that are tuned to the service.

# **Report Example: Viewership Monitoring Report**

Page 01  
08/01/94

VOLUNTEERSHIP MONITORING REPORT

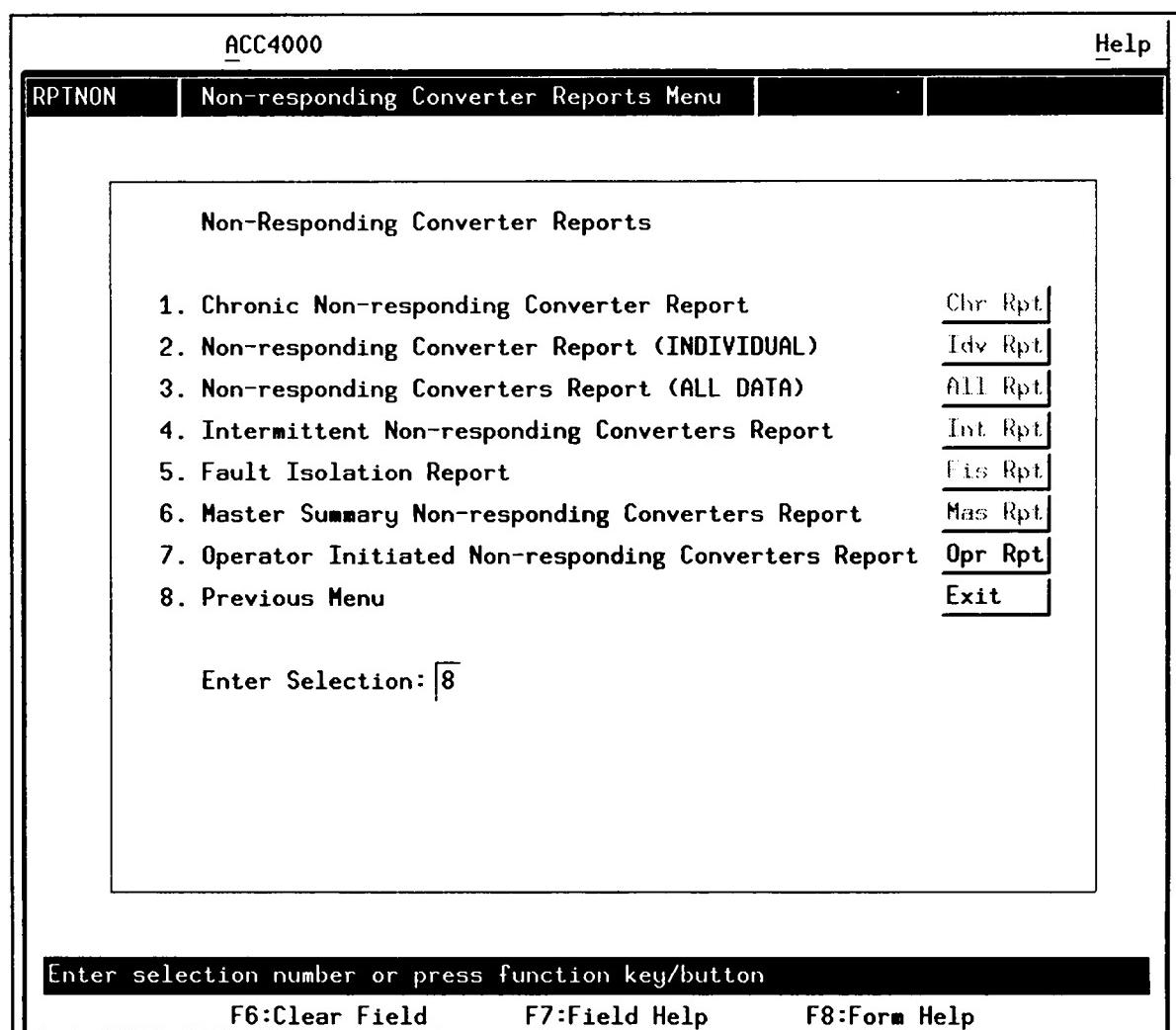
DATE OF POLL : 08/01/94 14:39

TEST001 493 1 1.00 100.00

[Press RETURN to continue; q to quit]

## Non-responding Converter Reports

The ACC-4000 provides seven different Non-responding Converter Reports to keep you informed on the status of the converters in the system.



*Non-responding Converter Reports Menu/Non-Responding Converter screen*

### What Information Do the Reports Provide?

The Non-responding Converter Information reports provide you with the following information for a range of two-way converters within a specified time frame. The default time frame of ten days is set in the system configuration file.

*Chronic Non-responding Converter Report*

This report identifies all converters that have not responded to any of the automatic two-way polls conducted during the specified time frame.

*Non-responding Converter Report (Individual)*

This report provides you with the results of all polls conducted on a particular converter.

*Non-responding Converter Report (All Data)*

This report identifies all converters which have not responded to any of the automatic two-way polls on each day during the time frame.

<i>Intermittent Non-responding Converter Report</i>	This report lists all converters that failed to respond to at least one of the previous polls conducted during the specified time frame.
<i>Fault Isolation Report</i>	This report allows you to see a list of specified converters that have not responded to polls in the Fault Isolation Utility (FISU).
<i>Master Summary Non-responding Converter Report</i>	This report provides you with a summary of all polls generated automatically by the ACC-4000 system. The summary includes a: <ul style="list-style-type: none"> <li>• Day-by-day summary</li> <li>• Summary for the specified time period</li> </ul>
<i>Operator Initiated Non-responding Converter Report (Individual)</i>	This report provides you with the results of the last two-way Converter Poll initiated by an operator for a selected range.

You use these reports to gather information on non-responding converters during a ten day period preceding the running of the report. The ten day time frame for collecting the non-responding converter information is a default set in the system configuration file. If you request information for more days than the number of days entered in the system configuration file, you receive an error message asking you to reenter the number.

#### *Chronic Non-responding Converter Report*

**Recommendation:** Print the report weekly

Converters are considered "chronic" if they don't respond to all of the automatic polls for the range selected. Select only those converters that are in a "house" status, since they are the only ones of interest and capable of responding on a regular basis. By selecting different date ranges and comparing the results with previous reports, you can do trend analysis. You can use the results of this report to assist you in correcting the problems that cause converters to time-out and interrupt service to subscribers.

#### *Fault Isolation Report*

**Recommendation:** Print the report weekly

If the Master Summary Report shows problems within the two-way plant, you can run the Fault Isolation Report to indicate where return problems have developed.

The Fault Isolation Report lists the converters specified in the Fault Isolation Utility and found in the Automatic Non-responding Poll results database. When any pair or group of pairs is listed, the probability is high that the portion of your distribution system or datapath where the pairs are located requires maintenance.

#### **Why Do You Use the Reports?**

*Master Summary Non-responding Converter Report*

**Recommendation:** Print the report and compare it with the:

- Master Summary Reports
- Automatic Non-responding Polls
- Operator Initiated Non-responding Polls

Sharp changes in the daily numbers indicates either a two-way plant or a datapath problem.

Significant differences between the Master Summary Report and individual poll results indicate large changes in the performance of the return plant over a 24-hour period.

*Operator Initiated Non-responding Converter Report*

**Recommendation:** Print this report monthly

When you perform an Operator Initiated Non-responding Poll, skip the fast poll option. The best time to initiate this poll is immediately after an Automatic Non-responding Poll has completed the verify pass. The IMPNRPOL screen does not offer a skip first pass option. You can accomplish this by temporarily disconnecting or shutting off the return data, then accepting the first part of this poll. Be careful that you disconnect the data stream during a quiet time. After reconnecting or re-enabling the data, you can answer Yes to the verify portion and print the report. Compare with report with the Chronic Non-responding Converter Report.

**Report Examples**

The two report examples on the following pages show you typical report printouts. While not every report option is included, you can see the general report format and report headings for each type of report. The reports are:

- Report 1. Chronic Non-responding Converter Report
- Report 2. Master Summary Non-responding Converter Report

The report data field list includes a description of the data provided in this report.

<b>Data Field</b>	<b>Description</b>
<i>CONVERTER ID</i>	The number assigned to the converter when it is added to the database.
<i>SERIAL NUMBER</i>	The number found on the label attached to the converter.
<i>ACCOUNT NUMBER</i>	A number assigned to the converter by the billing system.
<i>CONVERTER STATUS</i>	A value assigned by the billing system and used for reporting by the ACC-4000 (For example, the letters IH may stand for an in-house converter in a subscriber location).
<i>AMPLIFIER</i>	Identifies the amplifier the converter is connected to.
<i>HUB NUMBER</i>	Identifies the hub that the converter is connect to.
<i>RF-RETURN LEVEL</i>	Identifies the return level for two-way converters.

**Report Data:  
Chronic Non-responding  
Converter Report**

**Report Example:**  
**Report 1**  
**Chronic**  
**Non-responding**  
**Converter**

CHRONIC NONRESPONDING NON-RESPONDING CONVERTERS REPORT					
NO CONVERTER STATUS SPECIFIED					
START DATE	07/27/94	START CONVERTER ID	1	HUB	RF-RETURN
STOP DATE	08/05/94	END CONVERTER ID	1		
CONVERTER ID	SERIAL NUMBER	ACCOUNT NUMBER	STATUS	AMPLIFIER NUMBER	LEVEL
32770	T8B3900108	39		1 15	
32772	T2C2800037	29		1 15	
32779	J7E4001987	1A		1 15	

The report data field list includes a description of the data provided in this report.

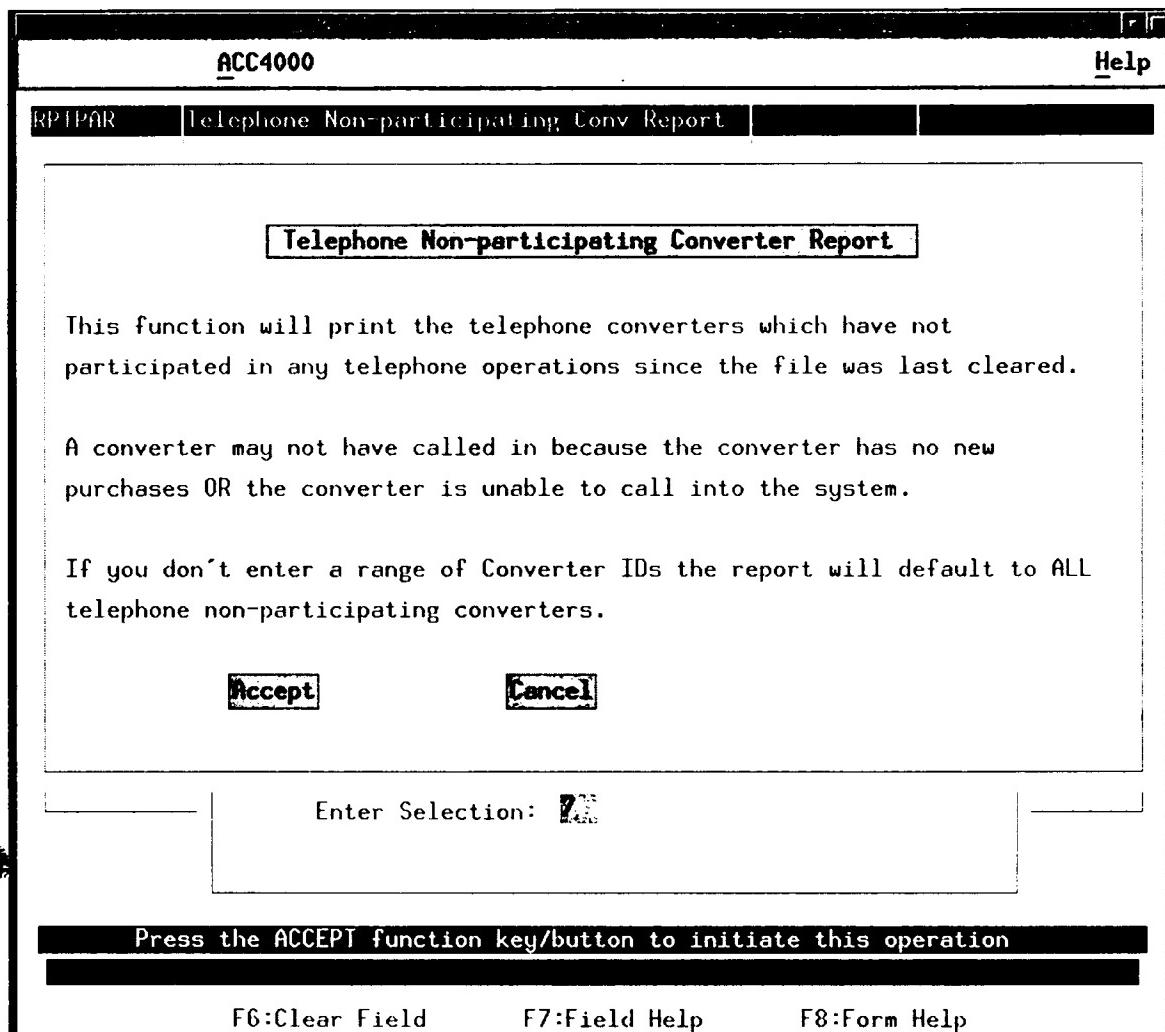
Data Field	Description
<i>START DATE</i>	The range of dates included in the report.
<i>END DATE</i>	
<i>START CONVERTER ID</i>	The range of converters included in the report.
<i>END CONVERTER ID</i>	
<i>INDIVIDUAL POLL SUMMARIES</i>	The poll results for each day included in the report date range.
<i>SUMMARY</i>	The total number of converters polled and the total non-responding and verified non-responding converters reported within the report date range.

**Report Data:**  
**Master Summary**  
**Non-responding**  
**Converter**

Master Summary Report	08/05/94 Page 01	Report Example: <b>Master Summary</b> <b>Non-responding</b> <b>Converter</b>
<b>MASTER SUMMARY</b> <b>NON-RESPONDING CONVERTERS REPORT</b>		
START DATE 07/27/94	START CONVERTER ID 32769	
END DATE 08/05/94	END CONVERTER ID 196608	
<b>INDIVIDUAL POLL SUMMARIES:</b>		
POLL DATE 08/01/94		
NUMBER POLLED	5	
NUMBER NON-RESPONDING	4	
NUMBER VERIFIED NON-RESPONDING	4	
<hr/>		
POLL DATE 08/02/94		
NUMBER POLLED	5	
NUMBER NON-RESPONDING	4	
NUMBER VERIFIED NON-RESPONDING	4	
<hr/>		
POLL DATE 08/03/94		
NUMBER POLLED	5	
NUMBER NON-RESPONDING	4	
NUMBER VERIFIED NON-RESPONDING	4	
[Press RETURN to continue; q to quit]		

## Telephone Non-participating Converters

This report allows you to see which FONE-way converters have not participated in any telephone operations since this file was last cleared.



*Telephone Non-participating Converter Reports screen*

### What Information Does the Report Provide?

The Telephone Non-participating Converter Information Report provides you with a list of all telephone converters not participating in any telephone operations since the last telephone non-participating converter report file cleared. The converters can be selected by range. The telephone converters may not have participated because:

- No new purchases have been made on the converter
- The converter is unable to call into the system

Use this report to check the possibility that a converter is unable to call into the system because of a converter malfunction or line problems.

### Why Do You Use the Reports?

**Recommendation:** Do the following weekly:

- Count the number of non-participating converters on the screen via (MAIN > CONVERTERS > IMPULSE RESPONSE POLLING> POLL TELEPHONE CONVS COUNT, click on DISPLAY).
- If the number is high, catch the converters switched off during the background time by running an operator initiated non-participating poll at a time other than the time initial poll ran in the background.
- Print the Telephone Non-participating Report to identify the individual non-participating converters.

The report data field list includes a description of the data provided in this report.

### Report Data: Telephone Non-participating Converter Report

Data Field	Description
<i>Converter ID</i>	The number assigned to the converter when it is added to the database.
<i>Serial Number</i>	The unique number found on the label attached to the converter.
<i>Account Number</i>	A number assigned to the converter by the billing system.
<i>Converter Status</i>	A value assigned by the billing system and used for reporting by the ACC-4000 (For example, the letters IH may stand for an in-house converter in a subscriber location).
<i>FONE Index</i>	The number a converter calls when requested to call into the system.
<i>Total Converters Non-participating</i>	Gives the total number to converters that did not participate in any telephone operation.

**Report Example:**  
**Telephone Non-**  
**Participating Converter**

**Nonparticipating Telephone Converters Report**

**08/12/94**  
Page 01

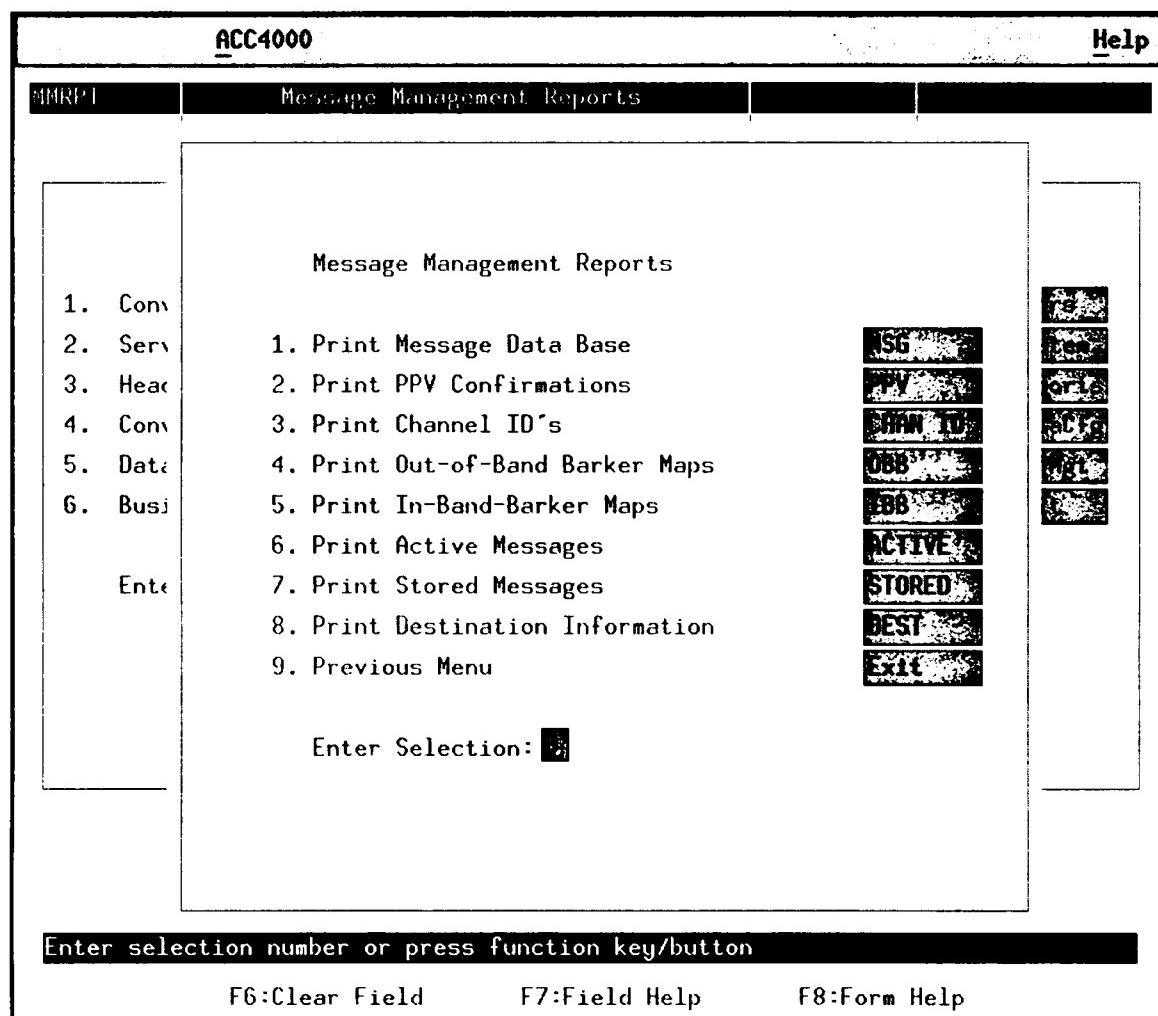
**PHONE NONPARTICIPATING CONVERTERS REPORT**

CONVERTER ID	SERIAL NUMBER	ACCOUNT NUMBER	CONVERTER STATUS	FONE INDEX
65543	T7F7600014	17		1

**Total Converters Non-participating:** 1

The ACC-4000 program allows you a choice of utility reports. Although the data base utilities have on-screen documentation, some of the utilities allow you to directly modify the database. See your System Administrator before using any of these utilities.

The Message Management Reports screen provides you with the following eight predefined reports.



*Message Management Reports screen*

The Message Management Reports provide you with the following information:

- Lists the messages in the controller's database
- Lists the scheduled (not necessarily active) PPV confirmations

## Data Base Utilities

### Message Management Reports

#### What Information Do the Reports Provide?

- Lists all of the channel IDs grouped by channel ID map
- Provides information about Out-of-Band Barker (OBB) maps
- Provides information about In-Band Barker (IBB) maps
- Displays a list of active and stored messages
- Displays a list of message and map destinations

## Why Do You Use the Reports?

### *Print Message Data Base*

Use this report to see the message number that the Message Manager has assigned to each message. The report also includes the message type, message title, and author fields for each message.

### *Print PPV Confirmation*

As the Message Manager allows only three scheduled PPV confirmations at a time, it is important that you track and eliminate them as they become inactive. This report includes the Service Number, service description, message title, start date and time, and end date and time for each PPV confirmation.

### *Print Channel ID's*

Run this report after you make any changes to a channel ID so that you have a quick reference to your channel ID assignments. This report lists all of the channel IDs grouped by channel ID map; and includes the cable and channel, message number and text (the channel ID).

### *Print Out-Of Band Barker Maps*

Run this report after you make any changes to an OBB map so that you have a quick reference to your OBB assignments. This report includes the OBB condition, message number, and message title fields for each OBB map.

### *Print In-Band Barker Maps*

Run this report after you make any changes to an IBB map so that you have a quick reference to your IBB assignments. This report includes the IBB condition, mode, data, and IBB number fields for each IBB map.

### *Print Active Messages*

Run this report to see a list of currently scheduled and active messages.

### *Print Stored Messages*

Run this report to see a list of the messages stored in the database.

*Print Destination Information*

Run this report to see the destination of messages and message maps.

The report data field list includes a description of the data provided in this report.

**Report Data:**  
**Message Management**  
**Data Base**

<b>Data Field</b>	<b>Description</b>
<i>Message Number</i>	The number assigned to the message when it is entered in the database.
<i>Message Type</i>	Specifies the message as one of the following message types: <ul style="list-style-type: none"><li>• Channel ID</li><li>• In-Band Barker</li><li>• Out-of-Band Barker</li><li>• Pay-Per-View Confirmations</li><li>• Stored Messages</li></ul>
<i>Title</i>	A title assigned to the message when it is created on the editor.
<i>Author</i>	Usually identifies the person who created the message on the editor.

**Report Example:**  
**Message Manager Data**  
**Base**

Message Data Base Report			
MESSAGE NUMBER	MESSAGE TYPE	TITLE	AUTHOR
1	Stored Msg	TV GUIDE	OLD MESSAGE EDITOR
2	Stored Msg	JOA MIXED MESSAGE	OLD MESSAGE EDITOR
3	Stored Msg	TEST FONT DEFAULTS	Rob Green
4	Stored Msg	JOA MIXED MESSAGE	OLD MESSAGE EDITOR
5	Stored Msg	PREVIEW	OLD MESSAGE EDITOR
6	Stored Msg	MESSAGE ORIGINAL TITLE	OLD MESSAGE EDITOR
7	Stored Msg	OLD STYLE MESSAGE	OLD MESSAGE EDITOR
8	Stored Msg	SINGLE QUOTE MESSAGE	OLD MESSAGE EDITOR

The report data field list includes a description of the data provided in this report.

**Report Data:  
PPV Confirmations**

<b>Data Field</b>	<b>Description</b>
<i>SERVICE NUMBER</i>	A number used to uniquely identify a purchasable event.
<i>TITLE</i>	A title assigned the message when it is created on the editor. [On the printed report the TITLE and DESCRIPTION headings are reversed].
<i>DESCRIPTION</i>	A description of the service. [On the printed report the TITLE and DESCRIPTION headings are reversed].
<i>START TIME</i>	Start time of the message.
<i>STOP TIME</i>	Stop time of the message.

**Report Example:**  
**PPV Confirmation**

**Pay-per-view Confirmation Report**

SERVICE NUMBER	TITLE	DESCRIPTION	START TIME	STOP TIME	PAY PER VIEW CONFIRMATIONS			
					05/19/94	Page 01	Jan 1 1995	2:20
1	TEST 2 WAY EVENT 1	MADE IN AMERICA						
2	TEST SERVICE 2	CHAVEZ FIGHT						
			Jan 3 1995	2:45	Jan 4 1995	7:00PM		

The report data field list includes a description of the data provided in this report.

**Report Data:  
Channel ID**

<b>Data Field</b>	<b>Description</b>
<i>Channel ID Map</i>	The number of the channel ID map.
<i>Channel</i>	The number of the channel displayed.
<i>Message Number</i>	The number assigned to the message when it is entered in the database.
<i>Text</i>	The text appearing on the screen to identify the channel.

**Report Example:**  
**Channel ID**

Report for Channel ID Map 1						
Chan	Msg #	Text	Chan	Msg #	Text	Chan
A 1	2	VH-1	B 1	1		
A 2	1	TNN	B 2	1		
A 3	4		B 3	1		
A 4	1		B 4	1		
A 5	6	DIS	B 5	1		
A 6	1		B 6	1		
A 7	1	MST	B 7	1		
A 8	1		B 8	1		
A 9	1	DISC	B 9	1		

CHANNEL ID REPORT

05/19/94  
Page 01

The report data field list includes a description of the data provided in this report.

**Report Data:  
Out-of-Band Barker**

<b>Data Field</b>	<b>Description</b>
<i>Out-of-Band Map</i>	The number of the map.
<i>Condition</i>	One of the seven OBB conditions.
<i>Message Number</i>	The number assigned to the message when it is entered in the database.
<i>Title</i>	A title assigned the message when it is created on the editor.

**Report Example:**  
**Out-of-Band Barker Maps**

Out-of-Band Barker Report	05/19/94 Page 01	
OUT-OF-BAND BARKER REPORT		
Out-of-Band Barker Report for Map 1		
Condition	Msg #	Title
Parental Control	1	PARENTAL CONTROL
Deauthorize	2	DEAUTHORIZE

The report data field list includes a description of the data provided in this report.

**Report Data:  
In-Band Barker Maps**

<b>Data Field</b>	<b>Description</b>
<i>In-Band Barker for Channel</i>	Number of the channel map.
<i>Condition</i>	Lists the four IPPV events using In-Band Barker messages.
<i>Mode</i>	Lists the In-Band Barker mode assigned to the message.
<i>Data</i>	List the data for the assigned mode.
<i>IBB Number</i>	The number assigned to the message when it is entered into the database.
<i>Modes</i>	Lists the available modes.
<i>Data</i>	Lists the data assigned to each mode.

**Report Example:**  
**In-Band Barker Maps**

In-Band Barkers Report			
In-Band Barkers for Channel A 10			
Condition	Node	Data	TBS #
Interstitial	1		2
Preview	2		
Scrambled/Purchasable	3		
Scrambled/Not Purchaseable	4		4
Modes	Data		
1 - No Action	None		
2 - Video barker	Channel #		
3 - OOB barker message	OOB Message #		
4 - IB barker message	OOB Message #		

The report data field list includes a description of the data provided in this report.

### **Report Data: Active Messages**

<b>Data Field</b>	<b>Description</b>
<i>IDX</i>	The number assigned to scheduled messages and maps for use by General Instrument personnel in routine maintenance procedures.
<i>MSG NUM</i>	The number assigned to the message when it is entered in the database.
<i>MESSAGE TYPE</i>	Specifies the message type for a message or message map.
<i>START DATE and START TIME</i>	The date and time a message is scheduled for broadcast.
<i>RE-BRD RATE</i>	The interval in minutes between the rebroadcasts of a message to a destination.
<i>STOP DATE and STOP TIME</i>	The date and time to stop broadcasting a scheduled message (not a required field).
<i>START CLEAR PUNCH DATE and TIME</i>	Specifies the date and time to clear a message or message map from the destination (the converter memory).
<i># CLEAR PUNCHES</i>	Specifies how many times to send the clear command to the destination.
<i>DST TBL ITEM</i>	The destination number which can be assigned to one or more messages or maps.

**Report Example:**  
**Active Messages**

Scheduled/Active Message Data Base Report										
INDEX	MSG NUM	MESSAGE TYPE	START DATE	START TIME	REF-BRD RATE	STOP DATE	STOP TIME	START CLEAR PUNCH DATE	START CLEAR PUNCH TIME	# PUNCHES
DST TBL ITEM										
6	4	PPV Conf	Sep 6 1994	3:06PM	90	Oct 31 1994	3:06PM	Oct 31 1994	3:06PM	3
11	1	OBP Map	Jul 6 1994	12:00AM	720	Jul 6 1994	11:59PM	Jul 6 1994	11:59PM	3
12	1	OBP Map	Jul 6 1994	12:00AM	720	Jul 6 1994	3:11PM	Jul 6 1994	3:11PM	3
3	13	IBB Map	Aug 1 1994	12:00AM	61	Aug 9 1994	11:59PM	Aug 9 1994	11:59PM	3
5	15	IBB Map	Sep 1 1994	10:57AM	60	Sep 30 1994	10:57AM	Sep 30 1994	10:57AM	3

Total number of messages: 5

[Press RETURN to continue; q to quit]

The report data field list includes a description of the data provided in this report.

**Report Data:  
Stored Messages**

<b>Data Field</b>	<b>Description</b>
<i>MESSAGE NUMBER</i>	The number assigned to the message when it is entered in the database.
<i>MESSAGE TYPE</i>	Specifies the message type as stored message.
<i>TITLE</i>	A title assigned to the message when it is created on the editor or updated in the Message Control Utility.
<i>AUTHOR</i>	Usually identifies the person who created or updated the message on the editor.

**Report Example:**  
**Stored Messages**

MESSAGE NUMBER	MESSAGE TYPE	TITLE	AUTHOR
1	Stored Msg	SAMPLE TEST 1	HC
2	Stored Msg	SUPER-DUPER TEST MESSAGE	M. Liebman
3	Stored Msg	SUPER-DUPER TEST MESSAGE	M. Liebman
4	Stored Msg	SUPER-DUPER TEST MESSAGE	M. Liebman
5	Stored Msg	SAMPLE TEST 1	HC
6	Stored Msg	SINGLE QUOTE MESSAGE	OLD MESSAGE EDITOR
7	Stored Msg	SAMPLE TEST 1	HC
9	Stored Msg	EPG	green
10	Stored Msg	EPG	green
11	Stored Msg	EPG	green
31	Stored Msg	SUPER-DUPER TEST MESSAGE	M. Liebman
32	Stored Msg	SUPER-DUPER TEST MESSAGE	M. Liebman
34	Stored Msg	SUPER-DUPER TEST MESSAGE	M. Liebman
Total number of messages:			13

The report data field list includes a description of the data provided in this report.

<b>Data Field</b>	<b>Description</b>	<b>Report Data: Destination Data Base</b>
<i>DESTINATION TABLE ITEM</i>	The number assigned to the destination which is available for use by one or more messages or maps.	
<i>DESTINATION DESCRIPTION</i>	Identifies the destination of a message or a message map.	
<i>DESTINATION TYPE and DESTINATION TYPE DESCRIPTION</i>	The defined destination types are: 1      Converter ID 2      Group, comprised of Group (not implemented) Subgroup (not implemented) Channel Cable 3      Not assigned 4      Service number 5      Global 6      Channel map	
<i>PERMANENT DESTINATION</i>	Indicates if the message or map destination remains in the database when the message or map switches from an active to a stored status.	

**Report Example:**  
**Destination Information**

Destination Database Report			
DESTINATION TABLE ITEM	DESTINATION DESCRIPTION	DESTINATION TYPE	PERMANENT DESTINATION
1	DEFAULT GLOBAL DESTINATION	5	GLOBAL
2	PAY-PER-VIEW DESTINATION	3	PPV CONFIRMATION
7	SCOTTSDALE CHANNEL MAP 1	6	SUBSCRIBER CHANNEL MAP
Total number of destinations		3	
[Press RETURN to continue; q to quit]■			

The ACC-4000 provides the procedures listed below to control the report printing.

It may be necessary to temporarily stop the printing of a report or even to permanently cancel it. It is also sometimes necessary to either enable or disable the print spooler. Use the following procedures to manage your report printing:

<i>Display printer queues</i>	Displays the reports currently queued for printing.
<i>Pause job</i>	Interrupts the printing temporarily.
<i>Resume job</i>	Resumes the printing after it has been interrupted by the pause feature.
<i>Cancel job</i>	Cancels printing of the report.
<i>Enable print spooler</i>	Places a number of reports in memory.
<i>Disable print spooler</i>	Disables the print spooler option.

To perform the various report control procedures, do the following

1. Click on the Reports button.
2. Click on the Rpt Ctl button to select the Control of Reports option.

The Control of Reports dialog box appears. The purpose of this screen is to allow you to choose a procedure.

If you wish to display the reports currently being queued up for printing, you now click on the Display button.

If you wish to pause, resume, or cancel any of the reports currently queued for printing, you now:

1. Click on the Pause, Resume, or Cancel button, depending upon whether you want to pause, resume, or cancel the printing of a report.

A dialog box appears asking you to identify the report to be paused, resumed, or canceled.

## Control of Reports

### Why Do You Use These Procedures?

### How to Use the Procedures

#### Display Printer Queues

#### Pause, Resume, or Cancel a Report

2. Type the ID number for the report to be paused, resumed, or canceled; then click on the Accept button.

The specified report is now paused, resumed, or canceled depending upon the operation you have just performed.

3. Click on the Continue button.

You are returned automatically to the Control of Reports screen.

**Enable/Disable Print Spooler**

If you wish to enable or disable the print spooler, you now click on the Enable or Disable button, depending upon whether you want to enable or disable the print spooler. The Print Spooler is automatically enabled or disabled depending upon which operation you have selected.

You are returned automatically to the Control of Reports screen.

## 14 • Message Manager

The Message Manager gives you the means to broadcast messages to destinations that you design, comprised of converters, for subscriber viewing. You can easily manage message broadcasting to control the information displayed on your subscribers' TV sets. A message can be general in nature and displayed periodically, such as a holiday greeting. You can also design a map to schedule a message display for a specific situation, such as when a converter is powered on.

### Introduction

One way to transfer your messages from the Message Editor System or original OSD Edit System to the ACC-4000 is via diskette. From the Message Editor System you can also send messages via serial transfer. With either method, you can choose only the messages that you want for placement into the database.

Once in the database, a stored message automatically begins broadcasting, if you created a schedule on the Message Editor System. However, you must schedule OSD Edit System messages on the Message Manager. Channel identifier (ID) map, in-band barker (IBB) map, and out-of-band barker (OBB) map message broadcasting takes place according to the schedule that you can create as part of their respective maps on the Message Manager.

It is also possible for your channel ID maps and OBB maps to be punched during the converter initialization process, if you set the configuration file (config.dat) parameter [305] to 0 or greater (for details, see *Volume III, Chapter 6, System Configuration File*). By this mechanism, these types of maps can reach their destinations when there is no scheduling information in the maps.

For complete information on the Message Editor System, refer to your *Message Editor System User Guide*. For complete information on the Message Manager, refer to your *Message Manager User Guide*.

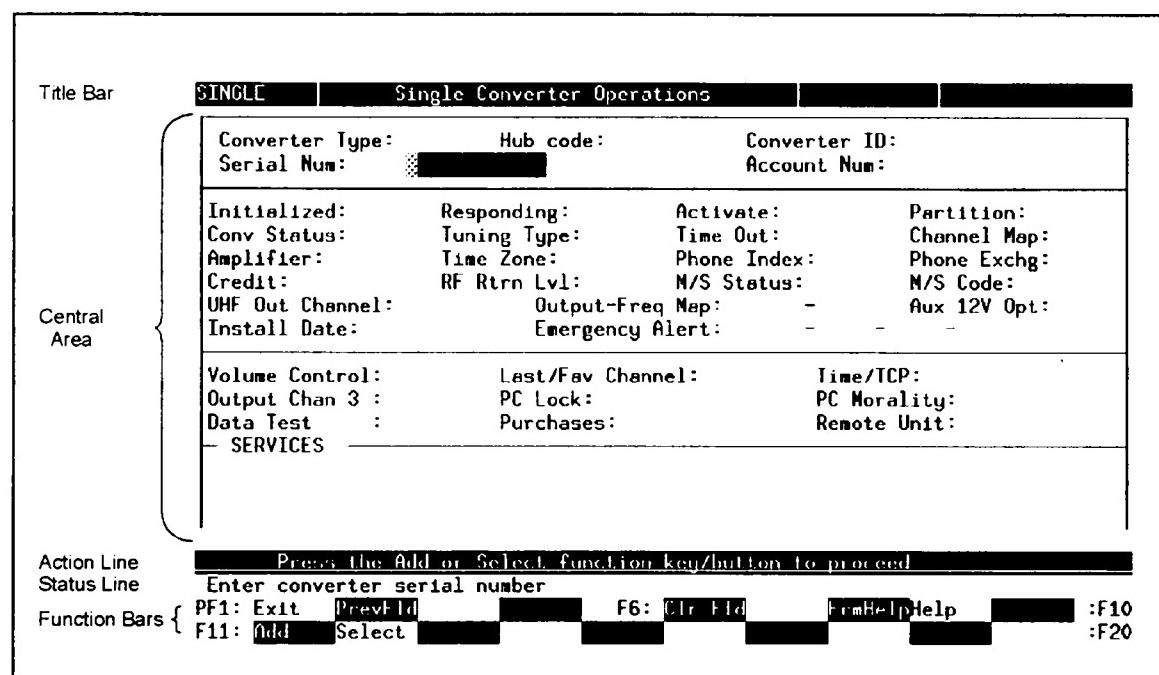


## Appendix • Character-Based Interface

The character-based interface (CBI) is one of the two user interfaces through which you can access ACC-4000 operations. The other is the graphical user interface (GUI), which is documented in detail in *Chapter 1* and *Chapter 2*. Although the CBI has a different appearance than the GUI, both interfaces let you perform the same ACC-4000 operations. Usually, the CBI runs on terminals or PCs rather than on the system console, although it can run on the system console as well.

When working in CBI screens, you enter information and access system options through a keyboard, not through a mouse.

It is easier to navigate using CBI if you have a good understanding of the CBI screen format. A typical CBI screen looks like this:



Typical screen in the character-based interface

The title bar consists of four boxes that run horizontally near the top of the screen. The first box displays the screen name, such as SINGLE. The second box displays the screen title, such as Single Converter Operations. The third and fourth boxes may display system and data base information.

This is the general work area in which you view, add, change, or delete the information that appears in fields.

On most screens that are not menus, a message may appear near the bottom of the screen that tells you what action to perform, such as what function key to press. An example of this kind of message is, "Press a function key/button then the Accept key/button to proceed."

### What is the Character-Based Interface?

### Mastering the CBI Screen

#### Title Bar

#### Central Area

#### Action Line

**Status Line**

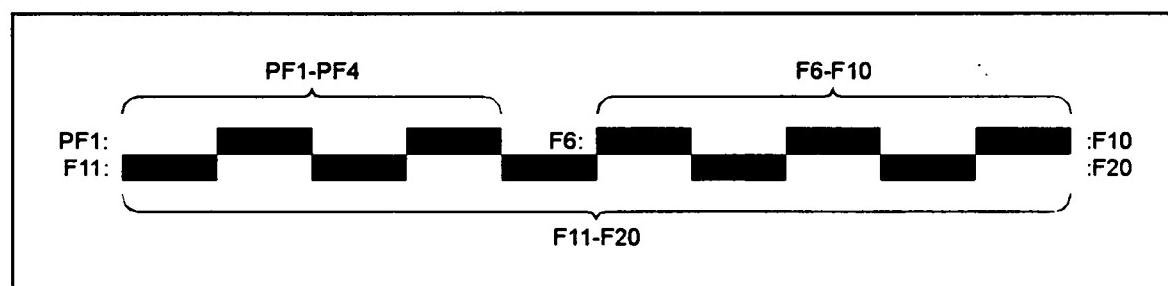
The status line displays three kinds of information:

- Field help for the field that is currently highlighted
- Status of a current process, for example, "Spawning stand-alone program ...."
- A request for your input, for example, "Press the Enter key to continue."

**Function Bars**

All screens in the character-based interface have a checkerboard appearance near the bottom. This area tells you which keys on the keyboard will perform the operation you want. For example, in the previous illustration, you can see that you can change the information in the screen by pressing F11, Add.

The first four blocks, beginning with a white block, represent the PF1-PF4 keys. The remainder represent function keys F6-F20. There are no operations in the ACC-4000 system that require function keys F1-F5.



*Function bars*

The function bars are context sensitive. The information they contain changes depending on which screen is current. For example, on the Single Converter Operations screen, pressing F11 lets you add a converter; however, on the Converters Menu, pressing F11 toggles between the single and range modes.

## Becoming Familiar with the Keyboard

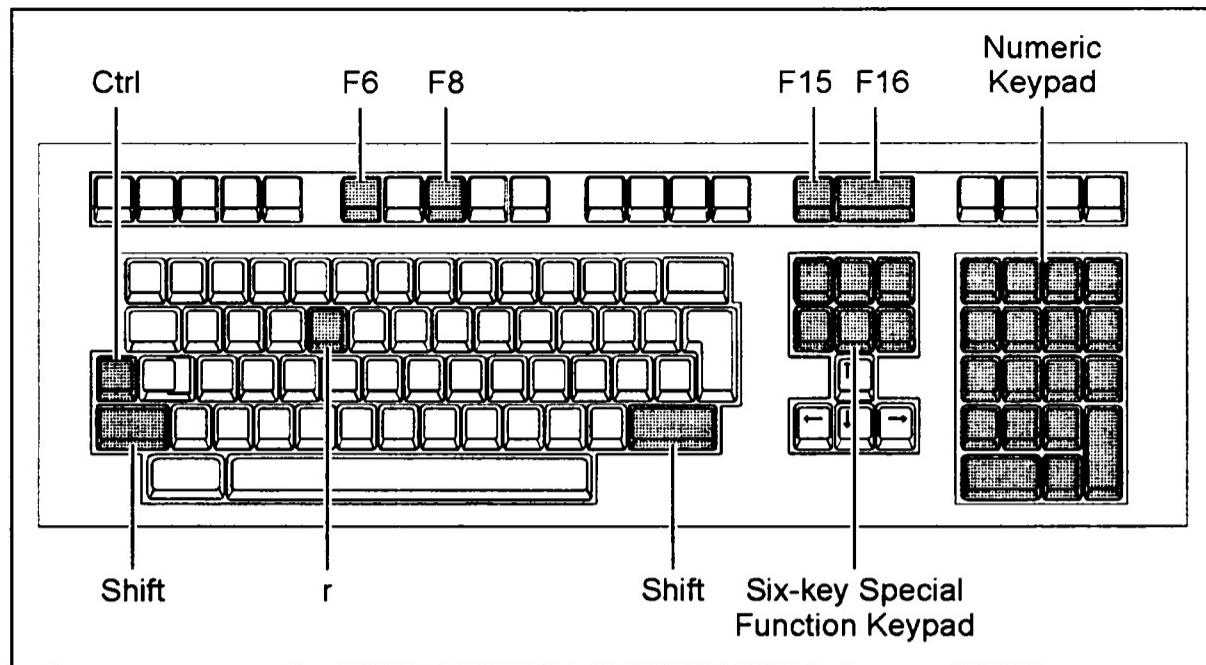
You are probably using one of two keyboard types: a VT series keyboard (VT220 and greater), or a PC keyboard. Although you perform most ACC-4000 functions in the same way on both types, there are differences. Information specific to each type begins on page 4.

**Regardless of which keyboard type you use, make sure that Caps Lock and Num Lock are off.**

These are the keys that perform the same functions on either type of keyboard:

<i>Enter</i>	On a menu, pressing this key executes the selected option.  <b>On other screens, this key moves the cursor to the next field on the screen. When you enter or change the information in a field, use the Enter key to save the new information and move to the next field.</b>
<i>Tab</i>	Moves the cursor to the next field on the screen.
<i>Backspace</i>	Deletes the character to the left of the cursor.
<i>Repaint</i>	Writes a fresh copy of the screen to the monitor. The repaint key is a two-key combination: you repaint the screen by pressing Ctrl + R.
<i>Arrow</i>	Arrow keys are always those on the arrow keypad, below the six-key special function keypad. Use the up and down arrow keys to go backward or forward in a zoom list.  <b>Do not use the arrow keys to advance through fields on a screen when you enter or change information. If you do, the data you type just before you press an arrow key may not be saved.</b>

### Using the VT Series Keyboard



*VT series keyboard*

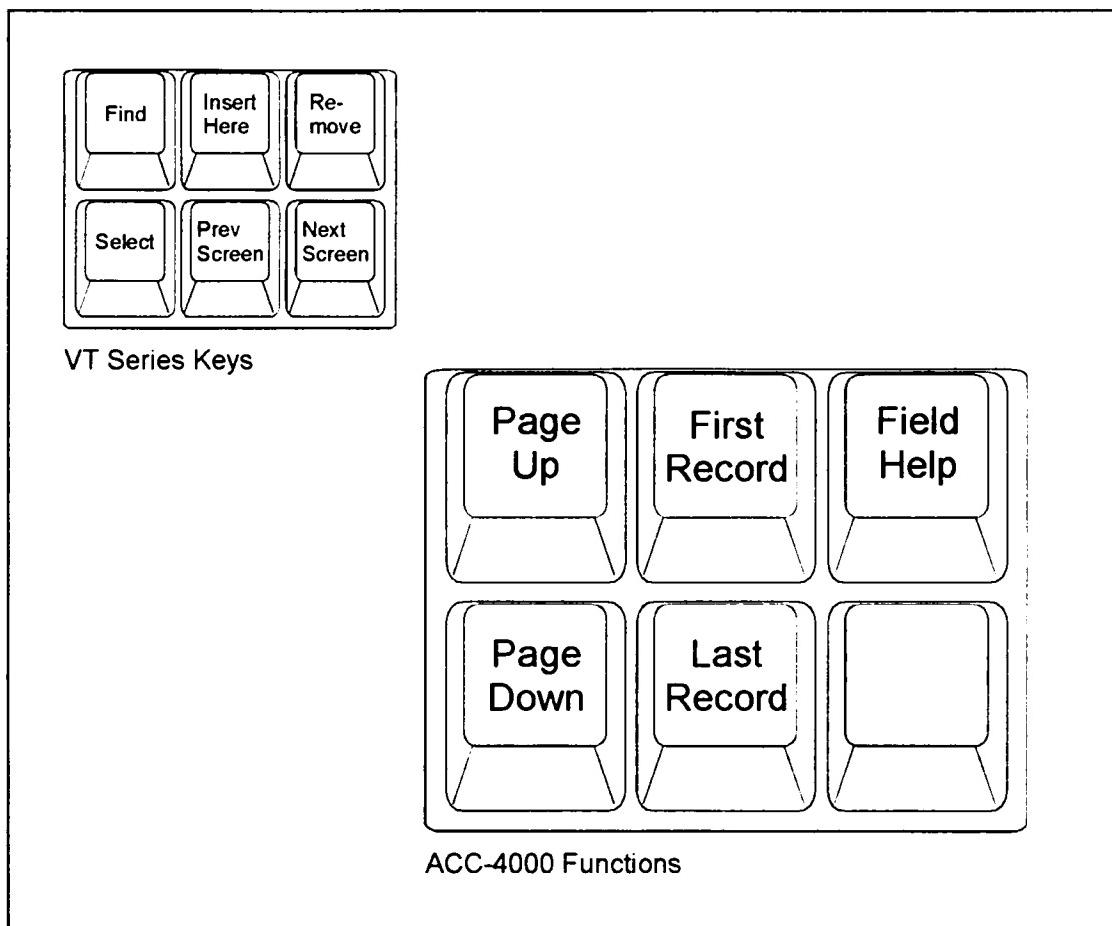
### Function Keys

The function keys on this keyboard are labeled from F1-F14, Help (which is F15), Do (which is F16), and F17-F20.

- Only F6-F20 represent ACC-4000 operations
- F6 is always the clear field key (Clr Fld)
- F8 is always the form help key (FrmHelp)

### Six-Key Special Function Keypad

The six-key special function keys – Find, Select, Insert Here, Prev Screen, Remove, and Next Screen – perform different functions in the ACC-4000:



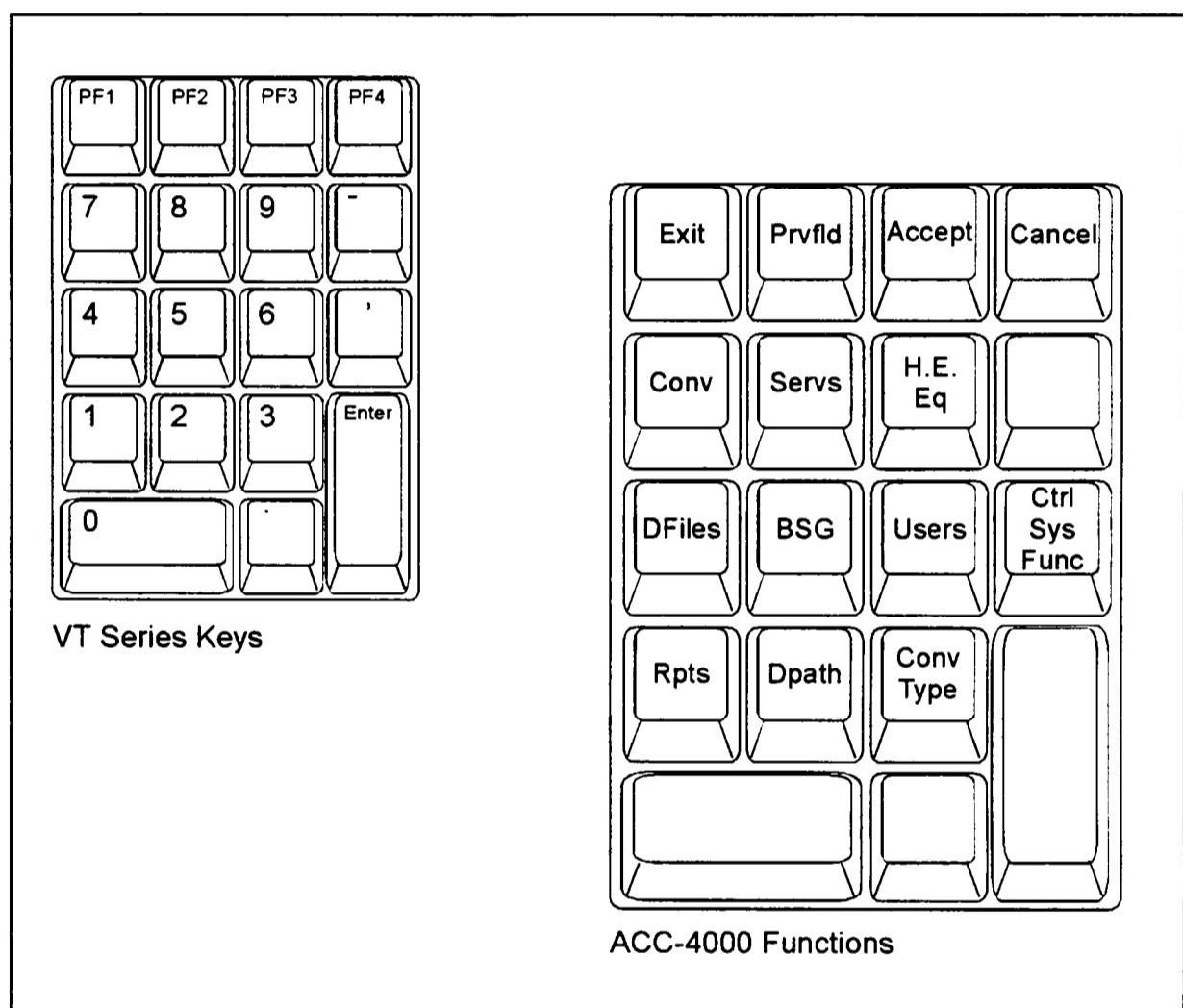
*Six-key special function keypad: VT series keyboard*

ACC-4000 Function	VT Series Key	Result
<i>Page Up</i>	Find	Use this key when you are in a zoom scrolling region and you want to see the previous set of entries in the list. For example, if the zoom list currently displays entries 6-10, but you want to see 1-5, press the Page Up key.
<i>Page Down</i>	Select	Use this key in a zoom scrolling region to see the next set of entries in the list.
<i>First Record</i>	Insert Here	Pressing this key brings you to the first entry in a zoom list.
<i>Last Record</i>	Prev Screen	Pressing this key brings you to the last entry in a zoom list.
<i>Field Help</i>	Remove	Pressing this key displays any available help about the current field.

**Numeric Keypad**

Each of the four PF keys at the top of the numeric keypad always has the same function, when that function is allowed. For example, pressing Exit (PF1) will always return you to the previous screen, but only when Exit appears as an option in the PF1 block of the function bars.

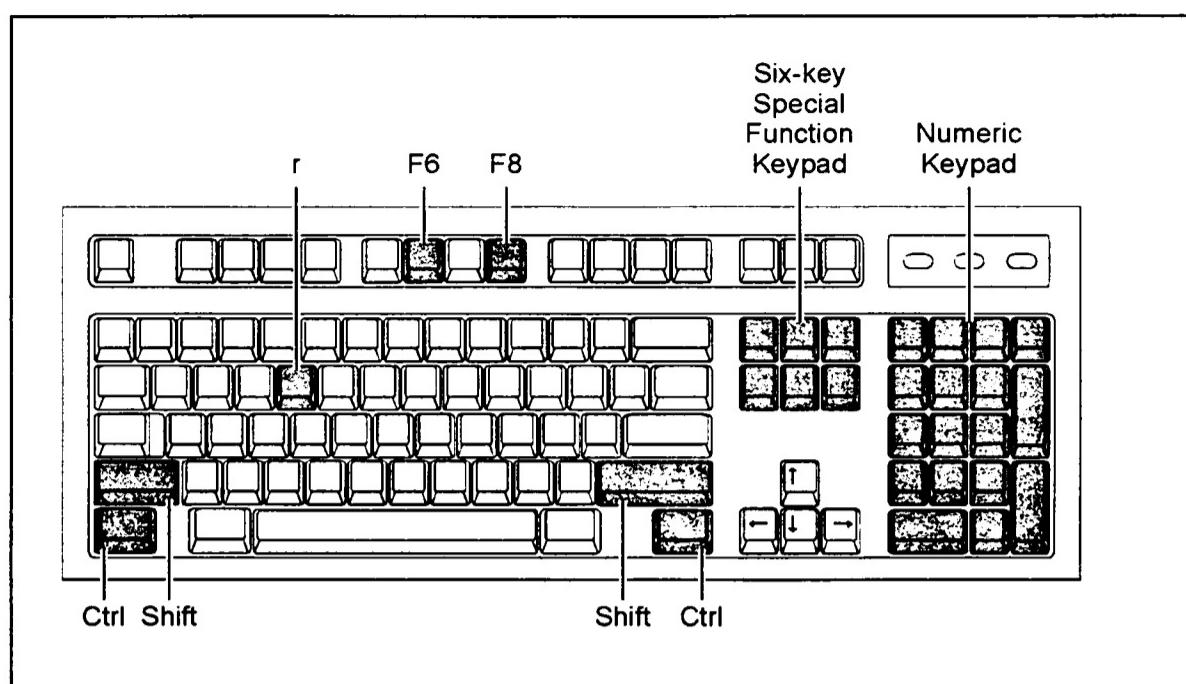
The numeric keys 1 through 9 and the ' key allow you to move directly to another Main Menu or Screen Options selection. For example, if you are on the Single Converter Data Collection screen and you want to print a report, just press the Rpts key (1) on the numeric keypad to access the Reports Menu. These keys are also called "quick navigation" keys.



*VT series numeric keypad*

<b>ACC-4000 Function</b>	<b>VT Series Key</b>	<b>Result</b>
<i>Exit</i>	PF1	Returns you to the previous screen. If you are on the Login screen, this key does not work.
<i>PrvFld</i>	PF2	Highlights the previous input field on the current screen.
<i>Accept</i>	PF3	Saves the work you performed on the current screen, or performs the action you selected.
<i>Cancel</i>	PF4	Restores the information in the screen to the way it was before you made any changes. The cancel operation works only if you haven't pressed the Accept key.
<i>Conv</i>	7	Sends you to the Converters Menu.
<i>Servs</i>	8	Sends you to the Services Menu.
<i>H.E. Eq</i>	9	Sends you to the Headend Equipment Information screen.
<i>Dfiles</i>	4	Sends you to the File Operations Menu.
<i>BSG</i>	5	Sends you to the Business System Gateway screen.
<i>Users</i>	6	Sends you to the User/Class Menu.
<i>Rpts</i>	1	Sends you to the Reports Menu.
<i>Dpath</i>	2	Sends you to the Data Path Configuration Menu.
<i>Conv Type</i>	3	Sends you to the Converter Type Selection screen.
<i>Ctrl Sys Func</i>	'	Sends you to the Control System Functions screen.

### Using the PC Keyboard



*PC keyboard*

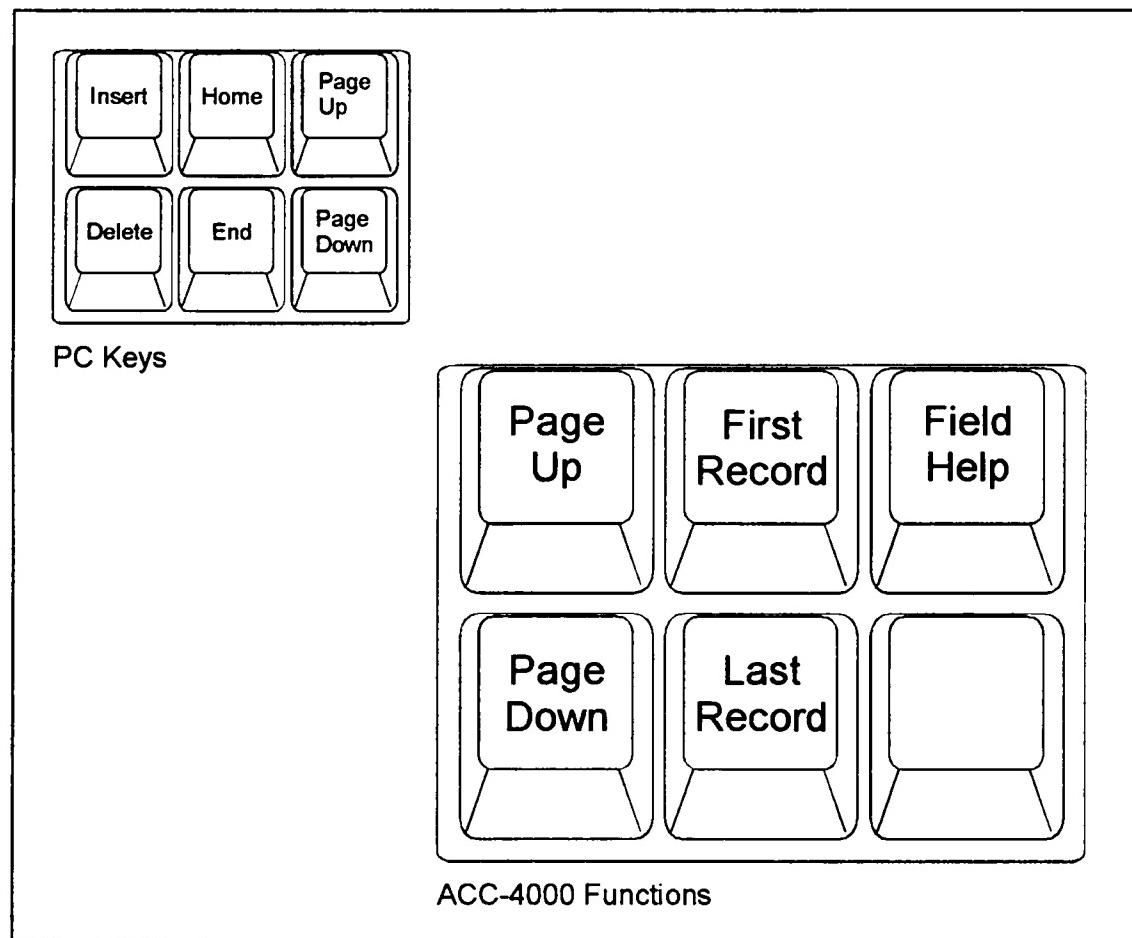
### Function Keys

The function keys on this keyboard are numbered from F1-F12. To select operations represented by F13-F20, use the Shift key in combination with the F3-F10 keys. For example, when the Change key is F13, press Shift + F3.

- Only F6-F20 represent ACC-4000 operations
- F6 is always the clear field key (Clr Fld)
- F8 is always the form help key (FrmHelp)

The six-key special function keypad on the PC keyboard – the keys that are labeled Insert, Delete, Home, End, Page Up, and Page Down – contains keys that have different names and perform different functions in the ACC-4000:

### Six-Key Special Function Keypad



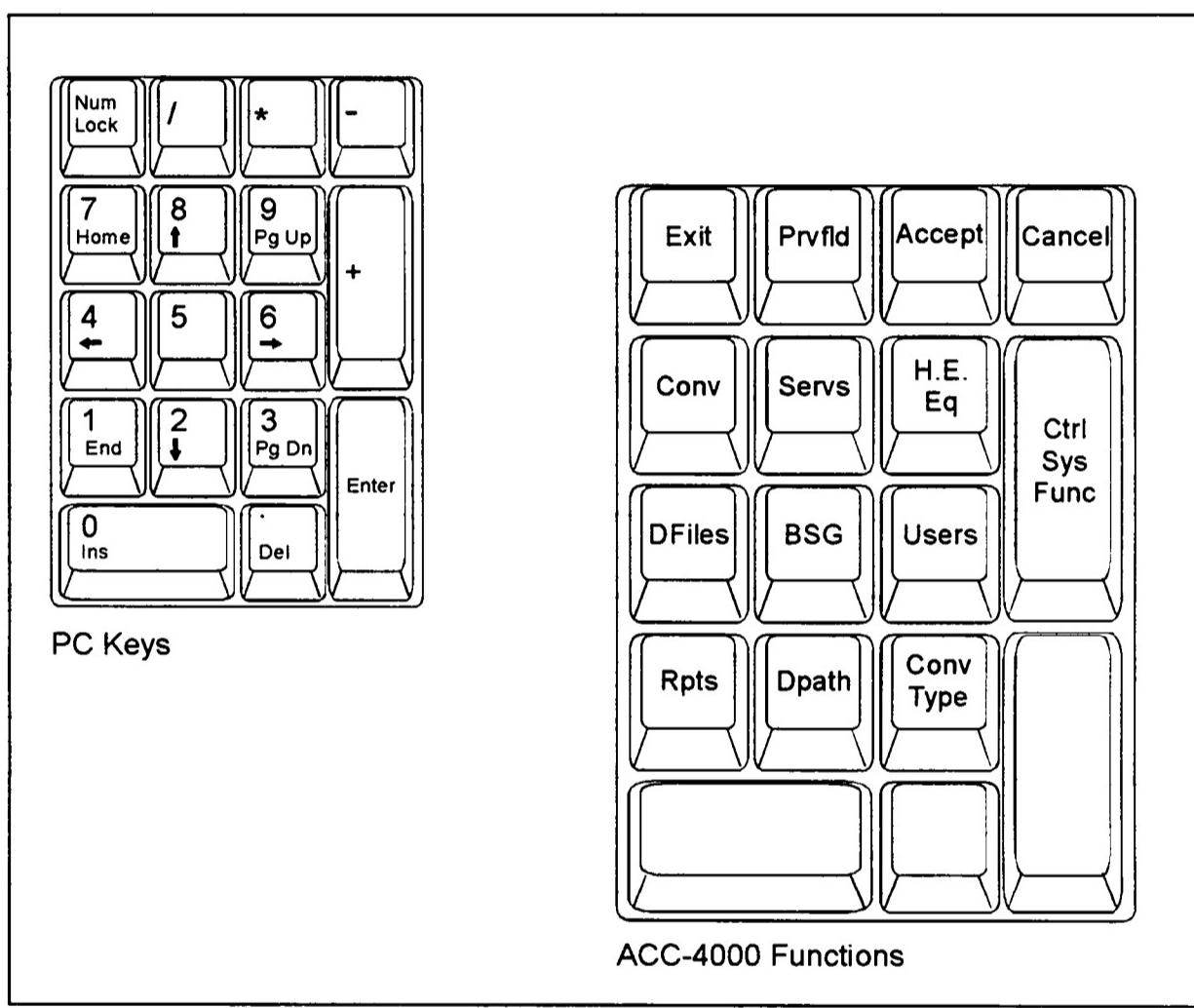
*Six-key special function keypad: PC keyboard*

ACC-4000 Function	PC Key	Result
<i>Page Up</i>	Insert	Use this key when you are in a zoom scrolling region and you want to see the previous set of entries in the list. For example, if the zoom list currently displays entries 6-10, but you want to see 1-5, press the Page Up key.
<i>Page Down</i>	Delete	Use this key in a zoom scrolling region to see the next set of entries in the list.
<i>First Record</i>	Home	Pressing this key brings you to the first entry in a zoom list.
<i>Last Record</i>	End	Pressing this key brings you to the last entry in a zoom list.
<i>Field Help</i>	Page Up	Press this key for any available help about the current field.

**Numeric Keypad**

Each of the four keys at the top of the numeric keypad always has the same function, when that function is allowed. For example, pressing Exit (Num Lock) will always return you to the previous screen, but only when Exit appears as an option in the PF1 block of the function bars.

The numeric keys 1 through 9 and the + key allow you to move directly to another Main Menu or Screen Options selection. For example, if you are on the Single Converter Data Collection screen and you want to print a report, just press the Rpts key (1) on the numeric keypad to access the Reports Menu. These keys are also known as "quick navigation" keys.



*PC series numeric keypad*

ACC-4000 Function	PC Key	Result
Exit	Num Lock	Returns you to the previous screen. If you are on the Login screen, this key does not work.
Prvflid	/	Highlights the previous input field on the current screen.
Accept	*	Saves the work you performed on the current screen, or performs the action you selected.

<i>Cancel</i>	-	Restores the information in the screen to the way it was before you made any changes. The cancel operation works only if you haven't pressed the Accept key.
<i>Conv</i>	7	Sends you to the Converters Menu.
<i>Servs</i>	8	Sends you to the Services Menu.
<i>H.E. Eq</i>	9	Sends you to the Headend Equipment Information screen.
<i>Dfiles</i>	4	Sends you to the File Operations Menu.
<i>BSG</i>	5	Sends you to the Business System Gateway screen.
<i>Users</i>	6	Sends you to the User/Class Menu.
<i>Rpts</i>	1	Sends you to the Reports Menu.
<i>Dpath</i>	2	Sends you to the Data Path Configuration Menu.
<i>Conv Type</i>	3	Sends you to the Converter Type Selection screen.
<i>Ctrl Sys Func</i>	+	Sends you to the Control System Options Menu.

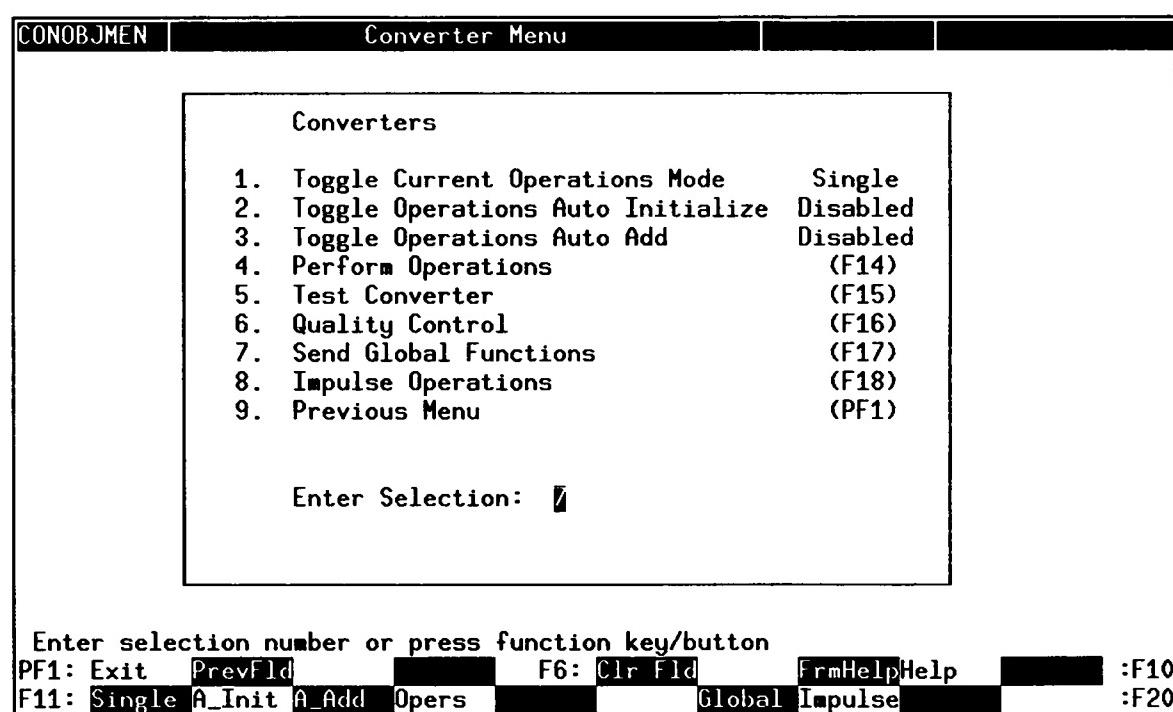
There are a few basic tasks to master if you are to become comfortable in the CBI environment in a short amount of time. They are:

## How to Perform Basic CBI Tasks

- Making a menu selection
- Entering information into a field
- Changing information in a field
- Canceling changes
- Moving through a zoom scrolling region
- Exiting screens
- Getting screen and field help
- Selecting a converter by Serial Number

**Making a Menu Selection**

On every menu in the system except the Main Menu or Screen Options, you can make a selection in one of two ways: by pressing a function key or by typing an option number.

*Sample menu*

To make a menu selection with a function key, press the function key listed to the right of an option. For example, if you are on the Converters Menu and you want to add a converter to the system, press the F14 key.

To make a menu selection by option number, type in the desired option number, found to the left of the option name, using the numeric keys located above the alphabetic keypad, then press the Enter key.

**Entering Information into a Field**

To enter information into a field:

1. Press the Tab key until the field you want is highlighted.
2. Type the information.
3. Repeat steps 1 and 2 until all the required information has been entered into the screen.
4. Press the Accept key (PF3) on the numeric keypad to save your work or to start the selected operation.

When entering numbers, be sure to use the numeric keys located above the alphabetic keypad. Remember that the numeric keypad is a function keypad when you are in the CBI. For example, pressing 7 on the numeric keypad will not enter 7 into a field, it will send you to the Converters Menu.

To change information displayed in one or more fields of an ACC-4000 screen:

1. Press the Tab key until the field you want to change is highlighted.
2. Press the Clr Fld key (F6).
3. Type in the new information.
4. Repeat steps 1 through 3 until you are done.
5. Press the Accept key (PF3) on the numeric keypad to save your work or to start the selected operation.

Occasionally, you may decide that the information you are entering is not correct, and you want the screen to return to the state it was in before you began. Take a look at the function bars to see if the Cancel key is enabled. If it is, just press the Cancel key (PF4) on the numeric keypad. All changes on the screen are cleared and it returns to what was displayed when it first appeared, or to what it looked like the last time the Accept key was pressed.

There are four ways to move through the scrolling region of a zoom box:

- One line at a time
- Continuous scrolling
- One group of items at a time
- To the first or the last item

## Changing Information in a Field

## Canceling Changes

## Moving Through a Zoom Scrolling Region

The screenshot shows a character-based interface for 'Single Converter Operations'. At the top, there are input fields for 'Converter Type: 3', 'Hub code: 1', 'Converter ID: 3', and 'Account Num:'. Below these, a table lists converter types with their names and partition types. The table has columns for Type, Model, Name, Partition, and Type. The data is as follows:

Type	Model	Name	Partition	Type
1	DRZ	Starcom II, 400, 450	0	
2	DRZA-*A, DRZP-*A	Starcom 450	0	
3	DRZI**-*A	Starcom 450/P3	0	
4	DRZI**-*AT	Starcom 450	T	
5	XT5-*1*	Starcom V	0	

Below the table, there is a section labeled 'SERVICES' which is currently empty. At the bottom of the screen, a message says 'Press the ACCEPT function key/button to accept value; press CANCEL to ignore.' The function bar at the bottom includes keys for PF1, PrevFld, Accept, Cancel, F6, Clr Fld, Help, F10, and F20.

*List of items in a zoom box*

You can move the cursor up or down a zoom list one line at a time by pressing the up arrow or the down arrow key on the arrow keypad.

To scroll continuously through a zoom list, hold down the up arrow or down arrow key instead of releasing it.

You can also move forward or backward along a list in groups of lines. Use the Page Up and Page Down keys on the six-key special function keypad. A new group of items will replace the information in the scrolling region. For example, converter types 1 through 5 are displayed in the zoom box on the screen in the above illustration. After you press the Page Down key, Converter Types 6 through 10 appear.

If you want to highlight the first item in a zoom list, press the First Record key; to highlight the last item, press the Last Record key. Both keys are on the six-key special function keypad.

#### **Exiting Screens**

Pressing the Exit key (PF1) on the numeric keypad returns you to the previous screen. You can continue to exit through a series of screens until you reach the Login screen.

You can also use the "quick navigation" keys on the numeric keypad to exit from a screen.

#### **Getting Screen and Field Help**

*Screen help*      Press the FrmHelp key (F6)

*Field help*      Press the Field Help key on the six-key special function keypad

If there is more than one screen of help for a particular screen or field item, a colon (:) appears in the lower right hand corner of the help screen box. To see an additional help screen:

1. Press the Enter key.
2. When done, press the Enter key again to exit the help function and return to the usual operations mode.

If there is only one screen of help, an (EOF): appears. Press the Enter key to exit from the help screen.

#### **When You Need to Select a Converter by Serial Number**

When you want to select a converter by Serial Number through the Single Converter Operations screen, press the Select key and then the Tab key. Pressing the Tab key highlights the Serial Number field instead of the Converter ID field.

When you hear a beep each time you press a key, the ACC-4000 is telling you that whatever you are doing is not what the system is expecting.

Look at the action and status lines at the bottom of the screen, just above the function bars. There may be instructions for you to follow or helpful information that tells you what the problem might be. If these two lines are blank, look at the function bars. They will tell you which actions are possible on the screen. Often, your problem is solved when you remember to press the Select, Change, or Add key before trying to enter any information into a screen.

If you try to enter numeric information into a field and you hear a beep each time you press a number key, or if you find that you have moved to a different screen without intending to do so, it could be that you are trying to use the numeric keypad. Data entry through the numeric keypad is disabled while you are in CBI mode. **Use the number keys above the alphabetic keypad.**

Here are several ways to make your experiences with the CBI as trouble-free as possible:

## Why is the Computer Beeping?

### Tips

*Look at the action and status lines*

Remember to look at the action and status lines; they give you helpful information if you seem to be stuck. For example, if you highlight the last entry in a zoom list and then hit the down arrow key by mistake, the screen becomes unresponsive – you can't exit, cancel, or perform any operation. The screen is waiting for you to press the Enter key, and it is the status line that gives you that instruction.

*Find out if you have a keyboard emulation problem*

If one or more of the keys on your keyboard do not function correctly, you may have a keyboard emulation problem. See your System Administrator for help.

*About your User Name and Password*

Finally, your personal User Name and Password are valid in both interfaces – you don't need different ones for the CBI.



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